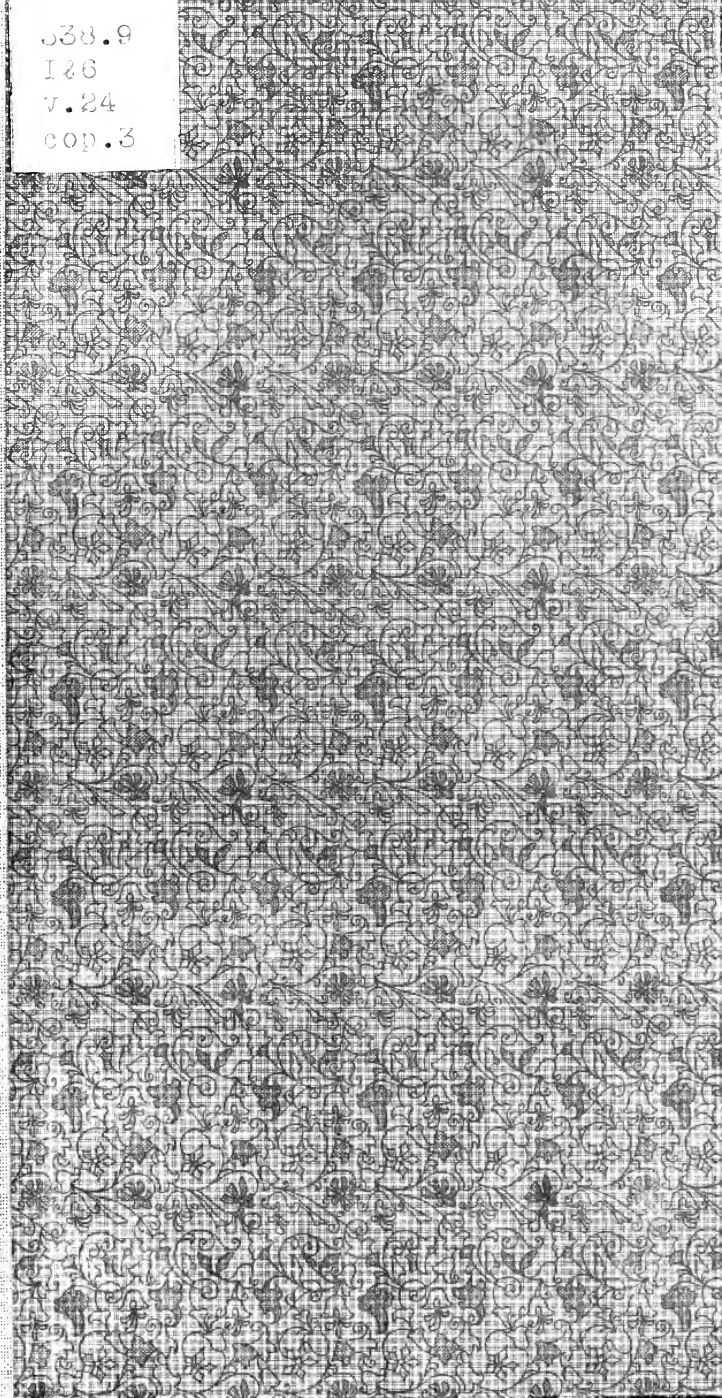


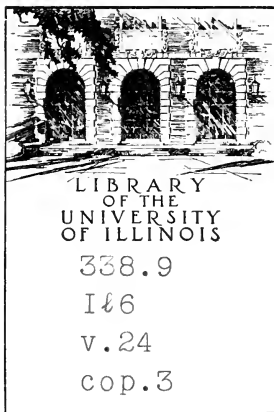
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Ill. Hist. Survey  
twenty-fourth Annual Report

OF THE

# Chief State Factory Inspector

OF

## Illinois

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BARNEY COHEN, Chief



For the Year July 1, 1916, to June 30, 1917

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[Printed by authority of the State of Illinois.]

ILLINOIS HISTORICAL SURVEY

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## LETTER OF TRANSMITTAL.

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ILLINOIS DEPARTMENT OF FACTORY INSPECTION,  
*1543 Transportation Building, 608 South Dearborn Street,*  
CHICAGO, ILLINOIS, *June 30, 1917.*

*His Excellency, Hon. Frank O. Lowden, Governor of Illinois.*

DEAR SIR: In accordance with section 2 of the act creating this department, I have the honor of submitting herewith the twenty-fourth annual report for the fiscal year ended June 30, 1917.

Very respectfully yours,

BARNEY COHEN,  
*Chief, State Factory Inspector.*



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## INTRODUCTION.

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Because of the changes made by the new Administrative Code which becomes operative July 1, 1917, this is the final report of the Illinois Department of Factory Inspection. Under this code, the department is abolished and is re-created as a subordinate division of the Department of Labor.

The plan of the Department of Labor is as follows:

There are twelve divisions under the supervision of the Director of Labor. These divisions are as follows:

- (1) General Office, Department of Labor,
- (2) Division of Labor Statistics,
- (3) Division of Chicago Free Employment Offices,
- (4) Division of East St. Louis Free Employment Office,
- (5) Division of Peoria Free Employment Office,
- (6) Division of Rockford Free Employment Office,
- (7) Division of Rock Island Free Employment Office,
- (8) Division of Springfield Free Employment Office,
- (9) Division of Board of Free Employment Office Advisors,
- (10) Division of Chief Inspector of Private Employment Agencies,
- (11) Division of Factory Inspection,
- (12) Division of Industrial Commission of Illinois.

In the above plan it will be noted that No. 11, the "Division of Factory Inspection," is successor to and takes the place of the present "Department of Factory Inspection." All divisions having to do with labor, labor legislation, labor law enforcement and labor problems are brought together in one department under the control and supervision of the Director of Labor. This will, it is felt, aid—not only in the economy and efficiency of administration—but will make for better law enforcement and unity of policy.

In the future, the matter covered by this report will be incorporated in the general report of the new Department of Labor. Past reports have been quite extensive and have duplicated from year to year considerable information to be found in previous volumes. For this and other evident reasons, the present report concerns itself mainly with statistical tables that were, for the most part, under way and reported as a matter of routine, since the beginning of the fiscal year, July 1, 1916. In reducing the number of pages by half and leaving statistics mainly to tell the story of the past year, and in refraining from extended comment on the work of the department during that year, it has been possible, it is believed, to present the essential facts concerning the work of the department in as short a space as is possible with the present system of reports.

A simpler system of reporting, it is hoped, will make a further reduction in the report for the coming fiscal year, this being in line with the unification of departmental reports and the policy of economy which will be put into immediate effect, beginning with the operation of the new code.

Those in receipt of this, the twenty-fourth and final report of this department as a department, are cautioned that it should be borne in mind that changes in legislation—particularly affecting the Child Labor Law—will become operative under the new Code, and that information covering all such points should be obtained from the Division of Factory Inspection, 1543 Transportation Building, that there may be no unwitting infraction of the law through ignorance or oversight.

The new division of Factory Inspection will use every effort to supply all necessary information and keep both employers and workers thoroughly posted as to all requirements of old and new laws. The aim of the division will be to work constructively, rather than aggressively, with all concerned, and to aid in the upbuilding of both the industries of the State of Illinois and the workers in those industries, that the function of constructive administration may be carried out with care and justice.

## REPORT OF THE CHIEF STATE FACTORY INSPECTOR.

---

This, the twenty-fourth annual report of the Chief State Factory Inspector, covers a transition period in both administration and legislation. Not only has the personnel of the department changed to some extent—so affecting both office administration and field inspections—but legislation—both Federal and State—to become operative later—has made many important changes in laws previously effective.

The history and scope of the laws covered by this report are as follows:

The "Child Labor Law"—An act to regulate the employment of children, created June 17, 1891, amended May 15, 1903. This law has two strong prohibitive measures; non-employment of children under 14 years of age in nearly all occupations; and restrictions of hours and conditions of employment of children between the ages of 14 and 16 years.

The "Garment Law" was enacted June 1, 1893. It regulates the manufacture of clothing, wearing apparel, and other articles, and prohibiting the manufacture for sale, in whole, or in part, of coats, vests, trousers, knee pants, overalls, cloaks, shirts, ladies' waists, purses, feathers, artificial flowers or cigars, in any room used for eating or sleeping purposes, in any tenement or dwelling house, except by immediate members of the family.

The "Blower Law" enacted June 11, 1897 compels the using of blowers on metal polishing machinery. The Forty-ninth General Assembly enacted a "Basement Blower Law." This law became effective June 29, 1915. It is an act in relation to employments creating poisonous fumes or dusts in harmful qualities; stating that such manufacture, repairing or altering of any metals or merchandise in such processes and places of employment shall be conducted in rooms lying wholly above the surface of the ground.

An act known as the "Structural Law" was enacted June 3, 1907 providing for the protection and safety of persons in and about the construction, repairing, alteration or removal of buildings, bridges, viaducts and other structures.

The "Health, Safety and Comfort Law," was enacted June 4, 1909 and amended June 29, 1915. This act, in keeping with its name, provides for the health, safety and comfort of employees in factories, mercantile establishments, mills and workshops in this State—The enforcement of this act demands constant progress in all mechanical lines.

The "Occupational Disease Law" was passed May 26, 1911, to promote the public health by protecting certain employees in this State from the dangers of occupational diseases, and further provides that every employer of labor, carrying on any work or process, endangering an employee to any illness or diseases peculiar to the work or process adopt reasonable and approved devices and methods for the prevention of same.

The "Women's Ten Hour Law" enacted June 15, 1909 amended June 10, 1911.

This act regulates and limits the hours of employment of females in any mechanical or mercantile establishment, or factory, or laundry, hotel, or restaurant, or telegraph or telephone establishment or office thereof, or in any place of amusement, or by any express or transportation of public utility business, or by any common carrier, or in any public institution, incorporated or unincorporated in this State, in order to safeguard the health of such employees.

The "Wash House Law" was approved June 26, 1913. It provides for wash rooms in certain employments to protect the health of employees and secure public comfort.

The statistical tables given in the following pages of this report are arranged so as to detail the work accomplished under each law. In considering these statistics, it is to be borne in mind that, under the system of reporting in operation in this department in the last four years, an inspector might work either as a specialist, in which case he made inspections under one law or he might make blanket inspections, these covering a number of laws. For this reason, the usual comparison of inspections with inspections of preceding years has been omitted. Under a new system of compilation, such duplications will be avoided.

## SUMMARY OF INSPECTIONS JULY 1, 1916, TO JUNE 30, 1917.

The figures appended show the number of industrial establishments visited and the number of inspections made according to the various laws under the jurisdiction of this department, and will give the reader an idea of the amount of work accomplished in the enforcement of these laws.

Often times conditions are such that it necessitates the department sending an inspector more than once into the same establishment, and many establishments are visited four and five times. We endeavor to show in this summary the number of establishments visited, also the number of inspections made in these establishments.

In the entire State we find that 47,706 establishments were inspected and 57,885 inspections made.

The scope of the Health, Safety and Comfort Law is so great that the number of inspections do not show the real amount of work accomplished, or the time it is necessary to spend in one establishment to correct the violations under this law. A week or ten days is very often spent making one inspection in an establishment. Very seldom is this same amount of time necessary in making a child labor inspection. With the exception of the department stores, one to two days is the longest time needed under the Child Labor Law.



## SUMMARY OF INSPECTIONS JULY 1, 1916, TO JUNE 30, 1917.

Laws enforced.	Number of establish- ments visited.	Number of inspected.
Total for State.....	47,706	57,885
According to—		
Child Labor Law, entire State.....	18,900	22,237
Child Labor Law, in Cook County.....	12,892	14,956
Child Labor Law, outside Cook County.....	6,008	7,281
Women's Ten Hour Law, entire State.....	19,740	24,926
Women's Ten Hour Law, in Cook County.....	13,869	17,021
Women's Ten Hour Law, outside Cook County.....	5,871	7,905
Garment Law, entire State.....	2,417	2,845
Structural Law, entire State.....	341	580
Blower Law, entire State.....	331	1,320
Wash House Law, entire State.....	618	618
Health, Safety and Comfort Law, entire State.....	5,359	5,359
Health, Safety and Comfort Law, in Cook County.....	2,793	2,793
Health, Safety and Comfort Law, outside Cook County.....	2,566	2,566

The following tabulation presents the number of employees in establishments visited, classified according to the particular law under which they were inspected:

NUMBER OF EMPLOYEES REPORTED IN ESTABLISHMENTS  
INSPECTED ACCORDING TO THE VARIOUS LAWS.

Year July 1, 1916, to June 30, 1917.

ESTABLISHMENTS INSPECTED ACCORDING TO THE CHILD LABOR LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	190,664
Number of females over 16 years of age.....	73,660
Number of males under 16 years of age.....	4,302
Number of females under 16 years of age.....	5,364

Total number of employees in Chicago..... 273,990

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	64,577
Number of females over 16 years of age.....	9,899
Number of males under 16 years of age.....	1,044
Number of females under 16 years of age.....	468

Total number of employees outside of Chicago..... 75,988

*Employees in State of Illinois—*

Number of males over 16 years of age.....	255,241
Number of females over 16 years of age.....	83,559
Number of males under 16 years of age.....	5,346
Number of females under 16 years of age.....	5,832

Total number of employees in State of Illinois..... 349,978

ESTABLISHMENTS INSPECTED ACCORDING TO THE WOMEN'S TEN HOUR LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	284,533
Number of females over 16 years of age.....	140,350

Total number of employees in Chicago..... 424,883

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	110,824
Number of females over 16 years of age.....	37,832

Total number of employees outside of Chicago..... 148,656

*Employees in State of Illinois—*

Number of males over 16 years of age.....	395,357
Number of females over 16 years of age.....	178,182

Total number of employees in State of Illinois..... 573,539

## ESTABLISHMENTS INSPECTED ACCORDING TO HEALTH, SAFETY AND COMFORT LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	106,936
Number of females over 16 years of age.....	37,842

Total number of employees in Chicago..... 144,778

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	80,295
Number of females over 16 years of age.....	9,352

Total number of employees outside of Chicago..... 89,647

*Employees in State of Illinois—*

Number of males over 16 years of age.....	187,231
Number of females over 16 years of age.....	47,194

Total number of employees in State of Illinois..... 234,425

## ESTABLISHMENTS INSPECTED ACCORDING TO GARMENT LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	26,796
Number of females over 16 years of age.....	33,640
Number of males under 16 years of age.....	514
Number of females under 16 years of age.....	1,487

Total number of employees in Chicago..... 62,437

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	2,215
Number of females over 16 years of age.....	4,402
Number of males under 16 years of age.....	43
Number of females under 16 years of age.....	145

Total number of employees outside of Chicago..... 6,805

*Employees in State of Illinois—*

Number of males over 16 years of age.....	29,011
Number of females over 16 years of age.....	38,042
Number of males under 16 years of age.....	557
Number of females under 16 years of age.....	1,632

Total number of employees in State of Illinois..... 69,242

## ESTABLISHMENTS INSPECTED ACCORDING TO THE BLOWER LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	2,923
Number of females over 16 years of age.....	69

Total number of employees in Chicago.....	2,992
---	-------

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	632
Number of females over 16 years of age.....	.....

Total number of employees outside of Chicago.....	632
---	-----

*Employees in State of Illinois—*

Number of males over 16 years of age.....	3,555
Number of females over 16 years of age.....	69

Total number of employees in State of Illinois.....	3,624
---	-------

## ESTABLISHMENTS INSPECTED ACCORDING TO STRUCTURAL LAW.

*Employees in Chicago—*

Number of males over 16 years of age.....	25,903
---	--------

Total number of employees in Chicago.....	25,903
---	--------

*Employees Outside of Chicago—*

Number of males over 16 years of age.....	6,659
---	-------

Total number of employees outside of Chicago.....	6,659
---	-------

*Employees in State of Illinois—*

Number of males over 16 years of age.....	32,562
---	--------

Total number of employees in State of Illinois.....	32,562
---	--------

## ESTABLISHMENTS INSPECTED ACCORDING TO WASH HOUSE LAW.

*Employees in Chicago—*

Total number of males over 16 years of age.....	32,738
---	--------

*Employees Outside of Chicago—*

Total number of males over 16 years of age.....	26,788
---	--------

*Employees in State of Illinois—*

Total number of males over 16 years of age.....	59,526
---	--------

## NIGHT INSPECTIONS.

Our deputy inspectors are required during the rush seasons of the year *i. e.* preceding the holiday season and in seasonal trades such as milliners, clothing manufacturers, florists, etc., to cover their allotted districts for night inspections. The following table gives the number of establishments visited under the Child Labor Law, Women's Ten Hour, and Garment Workers' Law.

In spite of the temptations of excess profits to manufacturers our deputies found very few establishments open and very few violations occurring under these laws were reported.

NUMBER OF ESTABLISHMENTS VISITED ON NIGHT INSPECTIONS  
ACCORDING TO THE VARIOUS LAWS.

Law.	Number of establishments.
Child Labor Law.....	154
Ten Hour Law.....	472
Garment Law.....	18
Total .....	644

COMPLAINTS.

During the fiscal year this department received 1,099 complaints, an analysis of them are given in the accompanying table. They were promptly investigated by the department and in 51 per cent of the cases the complaint was justified, while in the remainder there was no cause for any corrective orders being issued by this office.

CLASSIFICATION OF COMPLAINTS RECEIVED AND THE RESULTS OF  
INVESTIGATION.

Year.	Total of in- spection.	Child Labor Law.	Women's Ten Hour Law.	Blower Law.	Structural Law.	Garment Law.	Health, Safety and Comfort Law.	Occupational Disease Law.	Wash House Law.	Ventilation Law	Meritorious complaints resulting in violations.	Percent of mer- itorious cases reported.
July 1, 1916, to June 30, 1917.....	1,099	378	400	48	84	1	175	3	2	8	564	0.51

AGE AND SCHOOL CERTIFICATES.

In the past years this department has maintained an issuing office; from this office all the school certificates presented, which were issued by the parochial schools, were exchanged for age and school certificates—thereby giving the child the proper working permit.

In cooperation with this department, in order to comply with the provisions of the Child Labor Law, the board of education of the public school also maintained a bureau for the issuance of these age and school certificates upon receiving the school certificate from any child attending a public school.

The Catholic parochial issuing office of the city of Chicago issued the following number of working permits during the past fiscal year July 1, 1916, to June 30, 1917:

Month.	Number of orig- inal age and school certificates issued.	Number of dupli- cate age and school certificates issued.
July .....	1,083	26
August .....	560	28
September .....	620	40
October .....	403	26
November .....	347	24
December .....	273	23
January .....	337	38
February .....	205	23
March .....	252	32
April .....	261	18
May .....	275	24
June .....	2,206	35
Total .....	6,822	337

The following table shows by sex the number of age and school certificates issued monthly by the board of education in the city of Chicago for the period July 1, 1916, to June 30, 1917:

Months.	Boys.	Girls.	Total.
July.....	1,045	680	1,725
August.....	564	339	903
September.....	779	679	1,458
October.....	558	391	949
November.....	506	302	808
December.....	374	217	591
January.....	676	373	1,049
February.....	549	412	961
March.....	525	387	912
April.....	528	323	851
May.....	739	416	1,155
June.....	3,006	2,035	5,101
Total.....	9,909	6,554	16,463

A new system has been adopted by this department which enables us to ascertain the number of permits issued by the public schools, the Catholic parochial schools and the Lutheran parochial schools, outside the city of Chicago according to counties throughout the entire State; also the nativity of the children in question. This is the first time these statistics have been available.

NUMBER OF AGE AND SCHOOL CERTIFICATES OR WORKING PERMITS ISSUED  
OUTSIDE OF CHICAGO BY THE CATHOLIC PAROCHIAL SCHOOLS, ACCORDING  
TO COUNTY.

[illegible]

NUMBER OF AGE AND SCHOOL CERTIFICATES, OR WORKING PERMITS ISSUED  
OUTSIDE OF CHICAGO BY THE EVANGELICAL LUTHERAN PAROCHIAL  
SCHOOLS, ACCORDING TO COUNTY.

[illegible]

NUMBER OF AGE AND SCHOOL CERTIFICATES, OR WORKING PERMITS, ISSUED  
OUTSIDE OF CHICAGO BY THE PUBLIC SCHOOLS, ACCORDING TO COUNTY.

County.	Number of certificates issued.	Place of birth.													
		Illinois.	United States.	Germany.	England.	Russia.	Austria.	France.	Italy.	Sweden.	Norway.	Denmark.	Scotland.	Belgium.	Poland.
Adams	148	124	23			1									
Alexander	1	1													
Bond	1	1													
Boone	4	3	1												
Bureau	49	34	2		1	5		2	1				1	2	1
Champaign	329	27	2												
Clark	2	2													
Clinton	1	1													
Coles	8	8													
Cook (outside of Chicago)	293	225	26	4	1	10	17			6	2	1			1
DeKalb	69	53	14		1										1
DuPage	19	15	4												
Edwards	1	1													
Ford	23	21	2										1		
Fulton	4	1					2								
Henry	16	14	2												
Iroquois	2	1	1												
Jackson	1	1													
Jefferson	1	1													
JoDavies	5	5													
Kane	385	305	29	3		4	16			9	5				
Kankakee	192	152	32	3		3				1					
Kendall	2		2												
LaSalle	44	36	4				1			2	1				
Lee	58	51	4		1					1	1				
Livingston	12	11	1												
Lyons	1	1													
Macon	362	314	36	11	1										
Macoupin	4	4													
Madison	35	29	6												
Marion	55	45	7			1						2			
Marshall	7	6	1												
Mason	11	11													
McHenry	1	1													
McLean	57	47	8	1	1										
Montgomery	7	6	1												
Morgan	13	12	1												
Ogle	1	1													
Peoria	30	25	2		3										
Perry	4	3	1							1	8	1		23	
Rock Island	284	189	55			4				1	1				
Sangamon	381	303	45	9	5	3	3	1	4	1				1	1
St. Clair	303	241	54	1	1	1	2	2					1		
Vermilion	143	92	44				2	2					3		
Whiteside	15	8	5			2									
Will	5	5													
Williamson	29	16	11												
Winnebago	489	311	87		9	8			25	39	4		3		

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**Report of**

**Child Labor Law**

**July 1, 1916, to June 30, 1917**

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## CHILD LABOR.

One of the most interesting as well as important laws enforced by this department is the Child Labor Law. Violations of the provisions of this law are continuously decreasing and fewer prosecutions are found necessary. Education of the youthful worker, the parents and the employer is the aim of the department, so laying the basis for constructive work under the Civil Administrative Code.

Some of the provisions of this law are: Prohibition of employment of all children under 14 years; age and school certificates for all employed children between the ages of 14 and 16; the limiting of working hours to eight hours per day, and not more than 48 hours per week, or before 7:00 a. m. in the morning or after 7:00 p. m. in the evening; and the prohibition of all children from employment on or about any dangerous machinery.

The accompanying table details the amount of work accomplished by this department in carrying out the provisions of the Child Labor Law for the fiscal year. To facilitate compilation and comparison, the different industries have been classified into seven groups.

The number of establishments visited in Chicago and Cook County totals 12,892. In some instances it was found necessary to visit an establishment more than once, so bringing the grand total up to 14,956 inspections. The total number of children between the ages 14 and 16 years of age, coming under the provisions of this law was 9,666; 4,302 males, and 5,364 females. Of the total number of workers in inspected establishments, 3.5 per cent were children.

Outside of Chicago and Cook County in the State of Illinois, 265 cities and towns were visited; 6,008 establishments were inspected, total number of inspections being 7,281. Total number of children employed was 1,512; 1,044 being males and 468 females. Percentage of children to total number employed, 1.9 per cent.

In the entire State 18,900 establishments were visited; a total of 22,237 inspections being made in these establishments.

Table No. 1 shows the number of establishments located in Cook County, and inspections according to seven industrial classifications. This table also gives the grand total of employees in inspected establishments throughout the State.

TABLE NO. 1.

Month.	Number of establishments visited.	Industry.						Inspections.			Employees.							
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Night.	Total.	Males over 16 years.		Females over 16 years.	Boys 14 to 16 years.	Girls 14 to 16 years.	
1916																		
July.....	1,398	284	953	36	.....	1	17	37	1,328	1	.....	21,824	16,577	4,384	383	480		
August.....	1,123	344	718	26	.....	.....	15	18	1,123	42	.....	41,332	30,423	9,469	757	683		
September.....	1,032	178	708	13	1	.....	14	28	1,032	48	1	18,234	11,983	5,572	208	401		
October.....	912	187	672	16	.....	2	18	23	912	58	.....	20,179	13,074	6,379	218	508		
November.....	751	207	487	18	.....	.....	11	26	751	120	.....	17,334	11,796	4,629	345	561		
December.....	760	173	522	20	3	.....	16	26	760	200	127	33,753	19,148	13,596	464	545		
1917																		
January.....	1,171	240	853	51	3	.....	16	48	1,171	203	4	18,427	12,767	4,813	336	511		
February.....	994	105	689	53	3	.....	11	50	994	235	3	34,696	25,434	8,427	346	419		
March.....	1,399	282	958	28	.....	.....	14	47	1,329	286	2	18,897	12,761	5,227	406	503		
April.....	1,150	231	853	21	.....	.....	10	42	1,159	270	5	19,112	14,120	4,386	302	304		
May.....	1,331	231	978	59	3	1	17	42	1,331	318	3	18,476	13,818	4,137	222	269		
June.....	1,002	183	716	54	4	.....	7	37	1,002	283	4	11,796	8,753	2,641	255	147		
Total.....	12,892	2,689	9,190	395	23	5	166	424	12,892	2,064	154	273,990	190,664	73,660	4,302	5,364		

TABLE NO. 2—SUMMARY OF INSPECTIONS UNDER CHILD LA R. ACCORDING TO SEVEN INDUSTRIAL CLASSIFICATIONS IN CITIES AND TOWNS OUTSIDE OF COOK COUNTY.

City or town.	Number of establishments visited.	Industry.						Inspections.		Employees.					Per cent children to total employed.	
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.		Girls 14 to 16.
Aledo.....	49	4	42	2	2	3			49		161		161			
Algonquin.....	12	4	8						12	2	73	73				
Alton.....	29	3	25	1					29		103	96	6	1	1	
Anna.....	5	4	1						5		29	29				
Antioch.....	2	2	8						2		17	17				
Apple River.....	5	4	5						5		6	6				
Area.....	1		1						1		6	6				
Ashland.....	21	2	17	1					21		55	55				
Askum.....	6		6						6	4	11	11		1		
Averyville.....	13	1	12						13	7	29	28				3.4
Aurora.....	54	37	17						54	31	2,639	1,117	1,370	59	93	5.8
Batavia.....	11		6		2		3		11	10	618	580	24	12	2	2.3
Beardstown.....	64	5	56	1	2				64		282	280	1	1		4
Belleville.....	239	55	179	1	1	3			239	144	3,410	2,977	293	123	17	4.1
Beloit.....	4	4							4	1	87	87				
Belvidere.....	28	4	24						28	4	916	853	58	5		5
Big Foot Prairie.....	1	1							1		33	33				
Blackstone.....	1		1						1		2	2				
Blandinsville.....	20	1	18						20	61			61			
Bloomington.....	159	18	132	5	1	2			159	2	2,366	2,268	86	9	3	5
Bradley.....	4	4							4	2	385	346	28	11		2.9
Braidwood.....	14	1	13						14		39	39				
Breese.....	5		5						5		13	13				
Brock.....	1		1						1		2	2				
Brookport.....	2	2							2		19	19				
Buckingham.....	3		3						3		7	7				
Bunker Hill.....	21		21						21		45	45				
Bureau.....	1	1							1		35	35				
Bushnell.....	40	1	37			2			40		138	138				
Byron.....	12	1	11						12		29	29				
Cabery.....	2		2						2	1	4	4				
Cairo.....	38	12	25	1					38		712	667	39	4	2	9
Caledonia.....	2		2						2	6	6	6				
Cambridge.....	32	1	29			2			32		86	86				
Carlinville.....	38	3	34	1					38	16	124	124				
Carlyle.....	2	1	1						2		12	12				
Carpentersville.....	2	2							2	1	32	32				
Carrollton.....	34		32		1	1			34		97	97				
Carey.....	4		4						4		5	5				
Casey.....	19	4	14	1		1			19		50	50				
Chadwick.....	8		7			1			8		13	13				
Champaign.....	245	17	205	8	4	9	2		245	68	983	968	7	7	1	8
Charleston.....	50	7	40	3					50		265	264		1		4
Chatsworth.....	13	1	12						13		33	33				
Chebanse.....	8		8						8	5	12	12				
Clifton.....	7		6	1					7		15	15				
Clinton.....	36	1	31	4					36		133	133				
Coffeen.....	12		11	1					12		23	23				
Collinsville.....	1	1							1		250	250				
Columbia.....	2	2							2							
Cornell.....	7		5	1		1			7		8	8				
Coulterville.....	4	3	1						4		10	10				
Crescent City.....	5		5						5		6	6				
Crystal.....	7	2	5						7	4	63	63				
Cullom.....	7	1	5			1			7	6	14	14				
Dakota.....	4		4						4		8	8				
Danforth.....	5		5						5		9	9				
Decatur.....	7	5	2						7		1,210	908	281	2	19	1.7

TABLE NO. 2—Continued.

City or town.	Number of establishments visited.		Industry.						Inspections.		Employees.					Per cent children to total employed.	
			Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.		Girls 14 to 16.
DeKalb	14	3	11						14		511	409	96		1	5	1.2
Dixon	3	12	1						3		464	271	163		17	13	4.3
Downer's Grove	4	3	1						4		42	42					
Dundee	2	1	1						2	1	47	41			6		12.8
Dupo	12	12							12		314	314					
Duquoin	4	4							4		1,657	1,654	3				
Durand	14		14						14		22	22					
Dwight	30		28		1			1	30	2	55	55					
East Moline	6		4		2				6	5	14	10			4		28.6
East Peoria	3		3						3		67	67					
East St. Louis	409	13	375	15	2		3	1	409	54	3,075	3,051	6		18		.6
Edwardsville	44	9	35						44	2	259	258			1		.4
Elgin	96	25	69		1		1		96	52	3,004	1,856	1,002		60	86	4.9
Elizabeth	6		5						6		8	8					
Elliott	4		4				1		4		5	5					
Exline	1		1						1		2	2					
Fairbury	22	4	18						22		104	102	1		1		1.
Fairdale	6		6						6		7	7					
Fairview	2	2							2		289	280	8		1		.3
Fairview Landing	1	1							1		151	151					
Flanagan	4		4						4		9	9					
Forrest	11		11						11		17	17					
Forreston	7		7						7		9	9					
Freebary	10	3	7						10		57	57					
Freeport	22	12	7		2			1	22	13	971	887	53		31		3.2
Fulton	1	1							1		341	342					
Galena	18	1	17						18	14	43	43					
Galesburg	3		2				1		3		9	7			2		22.2
Galva	33	2	31						33		107	107					
Garden Prairie	4	1	3						4	1	13	13					
Geneva	17		17						17	13	29	29					
Gibson City	29	3	25				1		29		261	198	51		10	2	4.6
Gillespie	33	6	24		1		2		33		93	83	4		4	2	6.5
Gilman	19	4	15						19		40	40					
Girard	26	3	20		2		1		26		65	65					
Goodrich	1		1						1		2	2					
Goodwin	3		3						3		4	4					
Grand Ridge	8	1	7						8		15	15					
Granite City	21	3	17					1	21		2,086	2,086					
Granville	22	3	19						22		67	67					
Grayslake	8	1	7						8		40	40					
Greenfield	28	1	26				1		28		75	75					
Greenup	18		18						18		39	39					
Greenville	3	3							3		6	6					
Gurnee	1	1							1		13	13					
Hampshire	1	1							1		9	9					
Hanover	5	1	4						5		182	132	47			3	1.6
Hartland	1	1							1		22	22					
Harvard	21	4	17						21	5	322	305	15		2		.6
Harvey	3		3						3		113	113					
Hebron	5	1	4						5		42	42					
Herrin	2		2						2		10	10					
Heyworth	16		14		1		1		16		34	34					
Highland	14	7	7						14		256	181	61		4	10	5.5
Highland Park	32		31				1		32		98	92	4		1	1	2.
Hillsboro	40	4	35						40		107	106			1		.9
Hinckley	4	1	3						4		14	14					
Hoopeston	62	11	49		2				62		1,612	1,433	166		11	2	.8
Huntley	6	1	5						6		46	46					
Jacksonville	13	6	7						13	11	91	86	2		3		3.3
Jerseyville	42	7	33				1	1	42		132	129	1		2		1.5

TABLE NO. 2—Continued.

City or town.	Number of establishments visited.		Industry.						Inspection.		Employees.					Per cent children to total employed.		
			Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.		Girls 14 to 16.	
Joliet.....	146	22	122	2						146	4	839	820	7		11	1	1.4
Joy.....	3		3							3		9	9					
Juda.....	1		1							1		2	2					
Kankakee.....	26	17	9							26	13	1,526	1,029	443		15	39	3.5
Kempton.....	5		5							5	2	14	14					
Kingston.....	5		5							5		9	9					
Kirkland.....	9		9							9		13	13					
Lake Villa.....	6		6							6		9	9					
Lanark.....	10		9					1		10		21	21					
LaSalle.....	12	5	6		1					12		999	953	14		31	1	3.2
Leaf River.....	4	1	3							4		9	9					
Lebanon.....	3		3							3		8	8					
Lena.....	20		20							20		28	28					
Leonora.....	1		1							1		1	1					
Libertyville.....	12	2	10							12	4	175	175					
Lincoln.....	5	2	2		1					5		64	48	9		7		10.9
Litchfield.....	58	13	43	1	1					58		531	487	41		2	1	.6
Lockport.....	20	2	17	1						20		53	52					1.9
Loda.....	7		7							7	4	12	12					
Lombard.....	1		1							1		3	3					
Lostant.....	2		2							2		4	4					
Luds.....	1		1							1		1	1					
Lyons.....	2		2							2	2	168	168					
Macomb.....	87	10	71	1	3			1	1	87		541	541					
Madison.....	6	4	2							6		795	795					
Malta.....	3		3							3		4	4					
Manhattan.....	18		17		1					18		50	50					
Marengo.....	10	2	8							10	2	57	55	1		1		1.8
Marissa.....	26	1	25							26	17	53	53					
Marseilles.....	5	2	3							5		372	358	11		3		.8
Marshall.....	35		32		1					35		93	92			1		1.1
Martinsville.....	13	2	9	1				1		13		33	33					
Mascoutah.....	46	7	39							46	34	159	159					
Mattoon.....	108	14	92	1				1		108		511	508	1		2		.4
McConnell.....	2		2							2		3	3					
Mendota.....	10	5	4					1		10		50	44	4		1		4.
Metropolis.....	4	3	1							4		194	153	34		4	3	3.6
Milford.....	24		24							24		44	44					
Milledgeville.....	11	1	10							11		18	18					
Moline.....	30	16	9	3	2					30	29	2,848	2,471	334		31	12	1.5
Monmouth.....	96	5	83	1	4			2	1	96		444	439	3		2		.5
Monroe Center.....	5		5							5		7	7					
Montgomery.....	3	3								3	2	17	17					
Mound City.....	6	6								6		185	185					
Mt. Carmel.....	15	2	12					1		15		27	27					
Mt. Morris.....	10		9					1		10		15	15					
Mt. Olive.....	25	6	19							25		65	63	1		1		1.5
Mulberry Grove.....	16	2	14							16		38	38					
Murphysboro.....	22		22							22		55	55					
Naperville.....	3	3								3		419	397	15		7		1.7
Nashville.....	5	5								5		56	56					
Nevada.....	1		1							1		1	1					
New Athens.....	13	4	9							13	3	166	165			1		.6
Newton.....	17	2	13					2		17		46	46					
New Windsor.....	7		5		1					7		16	16					
Nora.....	2		2							2		3	3					
Normal.....	17		16		1					17		52	52					
Oakland.....	22	2	20							22		57	57					
Oblong.....	20	1	19							20		48	48					
O'Fallon.....	13		13							13		29	29					
O'Fallon.....	4	3			1					4		214	209			5		2.3

TABLE NO. 2—Continued.

City or town.	Number of establishments visited.		Industry.						Inspections.		Employees.					Per cent children to total employed.
			Manufacturing.	Store.	Office.	Amusements, Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.			Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.	Girls 14 to 16.	
Oglesby	3	3							3		490	480	8	2		4
Onargo	9		8				1		9		16	16				
Orangeville	4		4						4		8	8				
Oregon	9	2							9		58	58				
Ottawa	29	8	18	2			1		29		274	88	171	11	4	5.5
Pana	3		2						2		9	9				
Paris	21	10	10	1					21		664	602	55	6	1	1.1
Paxton	25	2	22	1					25		102	93	6	3		2.9
Pearl City	4	1	3						4		10	10				
Pecatonica	16		15	1					16	10	24	24				
Pekin	86	8	73	4			1		86		322	313	4	5		1.6
Peoria	494	76	392	6	2	14			494	492	4,316	3,582	625	92	17	2.3
Pernerville	2		2						2		3	3				
Peru	12	8	4						12		1,947	1,169	729	28	21	2.5
Piper City	5		5						5		13	13				
Plainfield	22	1	20		1				22		55	55				
Polk	1		1						1		2	2				
Polo	19		19						19		29	29				
Pontiac	32	3	29						32		488	286	184	12	6	3.7
Quincy	274	51	213	7		1	2		274		3,249	2,722	443	73	11	2.3
Reddick	2		2						2		4	4				
Red Oak	1		1						1		1	1				
Ridgeland	1	1							1		5	5				
Ridott	2		2						2		3	3				
Ringwood	3	1	2						3	1	22	22				
Robinson	53	10	39	1	1		2		53		174	174				
Rochelle	22	3	18				1		22		63	63				
Rock City	7		7						7	4	9	9				
Rockford	133	75	46	4		3	5		133	104	8,156	6,087	1,892	145	32	2.2
Rock Island	24	13	8	1					24	14	1,596	995	499	18	14	2.1
Rockton	6		6						6		7	7				
Roodhouse	30		29	1					30		412	412				
Rosiclare	2	2							2		382	380	2			
Rutland	3		3						3		5	5				
Sandwich	10	1	9						10		22	22				
Savanna	17	2	15						17		550	550				
Scales Mound	5		5						5		7	7				
Seneca	4	1	2	1					4		12	12				
Shabbona	9		9						9		13	13				
Sheldon	12	1	11						12		30	30				
So. Bartonville	2	2							2		700	692	3	5		.7
South Pekin	2		2						2		8	8				
Salon Mills	1		1						1		2	2				
Springfield	228	42	174	8		4			228	6	1,980	1,772	148	58	2	3.0
Spring Grove	3	1	2						3		18	18				
St. Anne	1	1							1		17	17				
St. Charles	5		4	1					5		427	407	6	14		3.3
Staunton	29	2	26	1					29	15	78	76		2		2.6
Sterling	5		3	2					5		72	71	44	7		9.8
Stillman Valley	6		6						6		27	27				
Stockdale	1	1							1		9	9				
Stockton	15		15						15		25	25				
Streator	28	15	13						28	2	468	268	172	9	19	6.0
Sycamore	18	1	17						18	2	54	54				
Tamara	3	2	1						3		85	85				
Terra Cotta	1		1						1		3	3				
Toluca	23	2	21						23		705	705				
Tonica	2	1	1						2		3	3				
Toulon	24	3	25						24		74	74				
Trenton	3	3							3		43	43				
Tuscola	36		33	2	1				36		106	104		2		1.9

TABLE NO. 2.—Concluded.

City or town.	Number of establishments visited.	Industry.						Inspections.		Employees.					Per cent children to total employed.
		Manufacturing.	Store.	Office.	Amusements, institutions, hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.	Girls 11 to 16.		
Union.....	3	1	2				3		10	10					
Union Hill.....	3						3		5	5					
Utica.....	19	1	15				19		45	45					
Venice.....	4		4				4		314	314					
Virden.....	4	6	34				40		124	123		1			
Virginia.....	30		29		1		30		57	57					
Waddams.....	2		2				2		4	4					
Warren.....	12		12				12		23	23					
Waterloo.....	7	6	1				7	3	75	72	2		1	3	
Watseka.....	23	1	22				23		55	55					
Waterman.....	6	1	5				6		10	10					
Waukegan.....	12						12	2	169	33	19	2	21	6	
Wenona.....	22	3	24		1	1	25		391	391					
Wesley.....	1						1		48	48					
West Chicago.....	3						3	1	67	67					
Wheaton.....	5	2	2				5		144	144					
Whitehall.....	34	4	2	1		2	34		147	147					
Wilmington.....	12		17	1			17		44	43			1	2	
Wilson.....	1						1		2	2					
Winnebago.....	7		7				7	2	10	10					
Winslow.....	4		4				4		6	6					
Witt.....	12		12				12		3	3	3	2		27	
Woodstock.....	26	2	24				26	12	50	50					
Wyoming.....	25	2	23				27		62	62					
Grand total.....	6,008	945	4,795	128	30	1	6,008	1,273	75,688	64,577	9,896	1,045	468	2.9	

During the past year 265 cities and towns were visited. In 75 of these towns children under 16 years of age were employed—38 of these 75 towns showed an equal or higher percentage of child labor than that for the entire State, viz:

City or town.	Per cent.	Children.	City or town.	Per cent.	Children.
Averyville.....	3.4	1	Mendota.....	4.	1
Aurora.....	5.8	152	Metropolis.....	4.6	1
Batavia.....	2.8	14	O'Fallon.....	4.6	1
Belleville.....	4.1	140	Ottawa.....	4.6	1
Bradley.....	2.9	11	Paxton.....	4.6	1
Dixon.....	4.3	30	Peoria.....	4.6	1
Dundee.....	12.8	6	Peru.....	4.6	1
East Moline.....	28.6	4	Pontiac.....	4.6	1
Elgin.....	4.6	149	Quincy.....	4.6	1
Freeport.....	2.2	31	Rockford.....	4.6	1
Galesburg.....	2.2	12	Rock Island.....	4.6	1
Gibson City.....	4.6	12	Springfield.....	4.6	1
Gillespie.....	6.3	1	St. Charles.....	4.6	1
Highland.....	5.5	14	Stanton.....	4.6	1
Highland Park.....	3.1	1	Sterling.....	4.6	1
Jacksonville.....	3.8	1	Streator.....	4.6	1
Kankakee.....	3.8	54	Waukegan.....	4.6	1
LaSalle.....	3.1	312	Wilmington.....	4.6	1
Lincoln.....	10.6	1	Witt.....	4.6	1





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## Women's Ten Hour Law

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## WOMEN'S TEN HOUR LAW.

### RESULT OF INSPECTIONS ACCORDING TO THE PROVISIONS OF THE WOMEN'S TEN HOUR LAW.

The statutes of the State of Illinois provide that women shall not be employed more than ten hours out of any twenty-four consecutive hours. The department finds the manufacturer willing to comply with its efforts to enforce this law and in the appended table it will be noted that 13,869 establishments were visited 17,021 times in Chicago and Cook County. In cities and towns outside of Cook County in the State of Illinois the number of establishments visited totalled 7,905, making a total of establishments visited in the entire State 19,740, and inspections reaching 24,926.

No extended discussion of the table is necessary here; the figures given below detailing the work of the department under this law for the period stated.

Table No. 1 shows the number of establishments located in Cook County and inspections according to industrial classification—also giving the grand total of employees.

TABLE NO. 1.

Month.	Number of es- tablishments visited.	Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and res- taurants.	Laundries, clean- ers and dyers.	First.	Second.	Night.	Total.	Males over 16 years.	Females over 16 years.
1916														
July.....	1,362	357	787	43	5	10	108	52	1,362	7	4	34,762	23,452	11,310
August.....	1,193	378	581	16	1	...	177	40	1,193	51	2	51,519	35,888	15,631
September ..	998	258	562	19	3	2	125	28	998	72	1	31,295	20,540	10,755
October.....	995	285	510	14	...	...	149	37	995	80	3	32,911	21,778	11,133
November....	1,101	344	501	33	10	2	160	51	1,101	166	7	28,056	18,383	9,673
December....	1,218	283	682	65	6	2	145	35	1,218	400	427	47,035	25,893	21,140
1917														
January.....	1,227	314	574	161	4	...	134	40	1,227	349	15	33,330	23,431	9,899
February.....	1,023	351	477	76	4	3	84	28	1,023	339	5	46,514	33,198	13,326
March.....	1,254	426	609	41	1	1	141	35	1,254	404	4	32,674	21,744	10,930
April.....	1,109	371	555	28	14	2	102	37	1,109	343	3	31,114	20,485	10,658
May.....	1,401	349	660	167	2	1	167	55	1,401	491	6	30,142	20,905	9,237
June.....	988	277	495	80	4	4	100	28	988	450	2	26,094	18,836	7,258
Total.....	13,869	3,993	6,993	743	54	27	1,592	467	13,869	3,152	472	424,883	284,533	140,350

Table No. 2 shows the number of establishments located outside of Chicago and Cook County and inspections according to industrial classifications—also giving the grand total of employees.

TABLE NO. 2.

City or town.	Number of establishments visited.	Industry.							Inspections.		Employees.		
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.
Aledo.....	10	3	6				1		10		40	24	16
Algonquin.....	2								2		53	51	2
Alton.....	37	1	36						37		283	117	166
Anna.....	4	1	2			1			4		380	140	239
Antioch.....	2		2						2		7	4	3
Apple River.....	2		2						2		4	2	2
Ashland.....	4		4						4		15	8	7
Ashley.....	1	1							1		8	7	1
Ashkum.....	2		1	1					2	2	6	2	4
Averyville.....	6		6						6	2	20	12	8
Aurora.....	116	55	45	1			10	5	116	82	7,068	5,292	1,776
Batavia.....	33	8	10	7	3		2	3	33	14	978	871	107
Beardstown.....	35	7	22				2	4	35		990	909	81
Belleville.....	130	32	82	6			8	2	130	100	3,007	2,142	865
Beloit.....	4	4							4	3	346	259	87
Belvidere.....	30	8	16	2			2	2	30	18	1,585	1,257	328
Blackstone.....	1		1						1		2	1	1
Blainville.....	3		2		1				3		11	8	3
Bloomington.....	200	18	148	5	2		23	4	200		3,332	2,155	1,177
Bradley.....	5	5			2				5	1	1,084	1,043	41
Braidwood.....	13	1	9	1			2		13		32	11	21
Bunker Hill.....	10	4	5	1			1		10		31	16	15
Bushnell.....	12	1	11						12		125	105	20
Byron.....	6		5	1					6		15	6	9
Cabery.....	2		1	1					2	1	4	2	2
Cairo.....	47	13	30	1			1	2	47	4	880	690	190
Caledonia.....	1		1						1		4	2	2
Cambridge.....	10	3	5		1		1		10		45	24	21
Carlinville.....	13	1	8	1			2	1	13	12	42	18	24
Carpentersville.....	1	1							1	1	12	10	2
Carrollton.....	7	1	6						7		27	18	9
Carey.....	1		1						1		2	1	1
Casey.....	24	3	17	1			3		24		35	47	48
Chadwick.....	4		3	1					4		9	3	6
Champaign.....	234	31	147	15	4	2	28	7	234	95	2,643	1,844	799
Charleston.....	39	4	26	2			6	1	39		283	149	134
Chatsworth.....	8	1	6	1					8		23	11	12
Chebanse.....	5		4				1		5	5	8	2	6
Chemung.....	1	1							1		66	55	11
Clifton.....	3		3						3		16	12	4
Clinton.....	49	3	36	2			7	1	49		358	221	137
Coffeen.....	7		5	1			1		7		16	7	9
Collinsville.....	3		2					1	3		8	2	6
Cornell.....	1		1						1		3	1	2
Crystal.....	4		3	1					4	1	14	5	9
Cullom.....	8		6	2					8	3	26	14	12
Dakota.....	3	2	1						3		19	16	3
Danforth.....	1		1						1		2	1	1
Decatur.....	12	3	9						12		702	473	229
DeKalb.....	33	8	23	1			1		33		1,748	1,431	317
Dixon.....	16	5	11						16		763	507	256
Downers Grove.....	4	2		1			1		4	1	45	30	15
DuQuoin.....	4	2	2						4		37	30	7
Durand.....	3		2						3		4	1	3
Dwight.....	21	3	11	3			3	1	21	2	154	94	60
East Moline.....	9	2	7						9	8	29	20	9
East Peoria.....	1	1							1		591	580	11
East St. Louis.....	283	34	217	15	1		14		283	24	1,468	837	631
Edwardsville.....	35	1	31	2				1	35		196	115	81
Elgin.....	101	29	55	7			6	4	101	77	7,003	3,509	3,494
Elizabetb.....	3		2	1					3		8	3	5
Elliott.....	2		2						2		4	2	2
El Paso.....	2	2							2		120	94	26
Eureka.....	1	1							1		188	137	51
Fairbury.....	16	2	10	1			2	1	16		97	51	46
Fairdale.....	1			1					1		3	1	42
Fairview.....	1	1							1		9	1	8

TABLE NO. 2—Continued.

City or town.	Number of establishments visited.	Industry.							Inspections.		Employees.		
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.
Flanagan.....	5	1	3	1					5		25	18	7
Forrest.....	5	1	3				1		5		48	38	10
Forreston.....	6	1	4	1					6		32	21	11
Freebury.....	10		10						10		30	14	16
Freeport.....	148	46	76	6		1	16	3	148	61	3,792	2,946	846
Fulton.....	1								1		56	25	31
Galena.....	23	4	16	1			2		23	21	138	65	73
Galesburg.....	27	7	19					1	27	2	439	138	301
Galva.....	13	2	10				1		13		216	185	31
Geneva.....	17	3	11	2			1		17	15	196	140	56
Gibson City.....	11	1	8	1				1	11	2	225	148	77
Gillespie.....	18	2	10	2			4		18		72	32	40
Gilman.....	16	2	10	2			2		16		104	69	35
Girard.....	9		6	1			2		9		36	16	20
Grand Ridge.....	3		2	1					3		8	3	5
Granite City.....	25	5	18	1			1		25		4,142	4,063	79
Granville.....	10	1	8				1		10		37	22	15
Grayslake.....	5	1	3	1					5		64	49	15
Greenfield.....	6		3	1			2		6		23	10	13
Greenup.....	12	3	6	1			2		12		32	15	17
Greenville.....	3	1	2						3		13	10	3
Hampshire.....	1	1							1		75	61	14
Hanover.....	3	1	1	1					3		177	126	51
Harvard.....	23	3	14	2			2	2	23	9	362	293	69
Harvey.....	2	2							2		1,883	1,846	37
Hebron.....	3		2	1					3		18	9	9
Herrin.....	1		1						1		4	3	1
Heyworth.....	9		7	1			1		9		28	12	16
Highland.....	4	4							4		214	152	62
Highland Park.....	21		18	2			1		21		133	75	58
Hillsboro.....	28	2	21	3			1	1	28		978	921	57
Hinckley.....	4		3	1					4		13	5	8
Hoopeston.....	48	8	25	1		2	5	7	48		2,128	1,734	394
Huntley.....	1		1						1		2		2
Jacksonville.....	39	3	30	1			5		39	21	306	188	118
Jerseyville.....	19	5	11				2		19		353	223	130
Johnsburg.....	2		2						2		4	2	2
Joliet.....	114	54	50	2			7	1	114	4	10,306	9,090	1,216
Kankakee.....	31	11	19					1	31	8	2,044	1,327	717
Kempton.....	1				1				1		2	1	1
Kingston.....	2								2		4	2	2
Kirkland.....	5		3	2					5		38	30	8
Lake Villa.....	1			1					1		2		2
Lanark.....	7		6	1					7		26	12	14
LaSalle.....	68	7	48	3			8	2	68		1,984	1,639	345
Leaf River.....	2		2						2		4	2	2
Lebanon.....	1	1							1		54	53	1
LeClare.....	1	1							1		95	85	10
Lena.....	9		7	1				1	9		35	14	21
Leonora.....	2		1	1					2		6	3	3
Leroy.....	1	1							1		105	60	45
Libertyville.....	12		9				1		12	5	142	89	53
Lincoln.....	15		12				1		15		187	84	103
Litchfield.....	43	6	29	1			6	1	43		393	220	173
Lockport.....	25	2	19	1			2	1	25		265	138	127
Loda.....	4		3	1					4		13	6	7
Lomax.....	1		1						1		6	3	3
Lombard.....	1			1					1		7	1	6
Lostant.....	1			1					1		3	1	2
Macomb.....	41	9	23	1	3	1	4		41		485	359	126
Malta.....	2			1			1		2		5	3	2
Manhattan.....	5		2	1			2		5		19	12	7
Marengo.....	13		10	1			2	1	13		62	32	30
Marrissa.....	10	2	5	1			2		10	7	49	24	25
Marseilles.....	22	4	16	1			1		22		759	668	91
Marshall.....	17	4	7	1			4	1	17		78	40	38
Martinsville.....	10	3	6				1		10		59	42	17

TABLE NO. 2 - Continued.

City or town.	Number of establishments visited.	Industry.							Inspections.		Employees.		
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.
Mascoutah.....	12	1	8	2	1	...	...	...	12	5	45	20	25
Mattoon.....	99	14	66	1	3	...	13	2	99	3	1,583	1,264	319
McConnell.....	2	...	2	...	...	...	...	...	2	...	5	3	2
Mendota.....	29	3	17	...	...	...	4	1	29	...	244	145	99
Metropolis.....	5	5	...	...	...	...	...	...	5	...	417	377	40
Milford.....	90	2	14	2	...	...	2	...	20	...	78	48	30
Milledyville.....	5	...	...	...	...	...	1	...	5	...	13	8	5
Moline.....	119	38	53	2	5	...	12	9	119	119	8,104	7,150	954
Monmouth.....	40	15	16	4	1	...	2	2	40	...	1,002	734	268
Montgomery.....	5	4	1	...	...	...	...	...	5	3	317	290	27
Mound City.....	1	1	1	...	...	...	...	...	1	...	258	257	1
Mt. Carmel.....	11	2	6	2	...	...	1	...	11	...	47	21	26
Mt. Olive.....	17	1	15	1	...	...	...	...	17	...	54	30	24
Mulberry Grove.....	6	2	2	1	...	...	1	...	6	...	16	8	8
Murphysboro.....	25	...	24	1	...	...	1	...	25	...	105	48	57
Naperville.....	...	...	2	...	...	...	...	...	...	...	436	409	27
Nashville.....	1	1	1	...	...	...	...	...	1	...	16	15	1
New Athens.....	14	1	10	2	...	...	1	...	14	...	39	20	19
Newton.....	11	2	6	1	...	...	1	1	11	...	47	19	28
New Windsor.....	1	1	...	...	...	...	...	...	1	...	4	3	1
Normal.....	19	...	13	1	...	...	...	1	19	...	108	65	43
Oakland.....	12	...	6	2	...	...	3	...	12	...	49	29	20
Oblong.....	15	5	13	2	...	...	5	...	25	...	77	36	41
Odell.....	...	...	3	1	...	...	1	...	7	...	21	9	12
Oglesby.....	...	...	3	1	...	...	...	...	7	...	914	876	38
Onarga.....	13	3	9	1	...	...	...	...	13	...	317	246	71
Orangeville.....	4	...	3	1	...	...	...	...	4	...	8	3	5
Oregon.....	21	4	15	1	...	...	...	1	21	...	317	273	44
Ottawa.....	93	27	55	1	...	...	7	2	93	9	2,178	1,530	648
Pana.....	17	...	1	...	...	...	...	...	17	...	15	2	13
Paris.....	21	5	12	2	...	...	3	1	17	...	430	232	198
Paxton.....	4	4	2	2	...	...	...	2	21	...	241	166	75
Pearl City.....	...	...	2	...	...	...	...	...	4	...	12	4	8
Pecatonica.....	1	...	5	...	...	...	...	...	7	3	62	49	13
Peekin.....	67	11	48	5	...	...	2	1	67	...	716	541	175
Peoria.....	848	144	565	7	18	4	97	13	848	842	10,766	6,518	4,248
Peru.....	28	12	13	...	...	...	2	1	28	...	1,975	1,188	787
Pinckneyville.....	2	1	...	1	...	...	...	...	2	...	7	3	4
Piper City.....	...	...	5	...	...	...	...	...	5	...	17	10	7
Plainfield.....	...	...	4	1	...	...	...	...	8	...	21	12	9
Polo.....	16	1	11	1	...	...	2	1	16	...	57	25	32
Pontiac.....	40	8	23	3	...	1	3	2	40	...	898	598	300
Quincy.....	221	71	122	2	3	...	16	4	221	61	6,139	4,391	1,748
Ringwood.....	1	...	...	...	...	...	...	...	1	...	2	1	1
Robinson.....	26	2	15	2	...	...	6	1	26	...	137	72	65
Rochelle.....	17	3	12	1	...	...	...	1	17	...	272	187	85
Rockford.....	285	27	212	14	...	...	25	7	285	282	17,365	13,717	3,648
Rock Island.....	95	33	37	3	...	...	16	6	95	47	4,491	3,173	1,318
Rockton.....	3	1	2	...	...	...	...	...	3	...	39	36	3
Roodhouse.....	13	4	7	...	...	...	1	1	13	...	88	59	29
Rossville.....	1	1	...	...	...	...	...	...	1	...	106	86	20
Roundout.....	1	1	...	...	...	...	...	...	1	...	29	28	1
Rutland.....	5	...	4	...	...	...	...	...	5	...	66	54	12
Sandwich.....	9	1	5	1	...	...	2	...	9	...	342	311	31
Savanna.....	31	4	20	3	...	...	3	1	31	...	370	298	72
Scales Mound.....	4	...	2	1	...	...	...	...	4	...	8	1	7
Seneca.....	...	...	1	...	...	...	...	...	1	...	8	2	6
Shabbona.....	2	...	2	...	...	...	...	...	2	...	4	2	2
Sheldon.....	2	...	2	...	...	...	...	...	2	...	6	1	5
So. Bartonville.....	1	1	...	...	...	...	...	...	1	...	597	594	3
So. Pekin.....	4	1	...	...	...	...	2	...	4	...	203	193	10
Springfield.....	296	44	210	7	1	...	29	5	296	5	5,830	3,515	2,315
Spring Grove.....	1	...	1	...	...	...	...	...	1	...	2	1	1
St. Augustine.....	1	...	1	...	...	...	...	...	1	...	2	...	...
St. Charles.....	5	8	...	...	...	...	...	...	8	1	884	812	72
Staunton.....	16	4	12	...	...	...	...	...	16	15	55	26	29
Sterling.....	22	2	18	2	...	...	...	...	22	...	258	104	154

TABLE NO. 2—Concluded.

City or town.	Number of establishments visited.	Industry.							Inspections.		Employees.		
		Manufacturing.	Store.	Office.	Amusements.	Institutions.	Hotels and restaurants.	Laundries, cleaners and dyers.	First.	Second.	Total.	Males over 16 years.	Females over 16 years.
Stillman Valley....	1		1						1		2	1	1
Stockton.....	11	4	5	1			1		11		52	33	19
Streator.....	106	36	57	3			9	1	106	4	3,556	2,889	667
Sycamore.....	23	6	15				1	1	23		438	294	144
Tamms.....	2	2							2		96	94	2
Toluca.....	3		3						3		9	6	3
Tonica.....	4		3	1					4		9	5	4
Toulon.....	6		5				1		6		24	16	8
Tuscola.....	28	5	14	1			7	1	28		161	87	74
Union.....	4	1	3						4		41	33	8
Union Hill.....	1			1					1		2	1	1
Urbana.....	1			1					1		4		4
Utica.....	25	8	10	3			4		25	4	365	327	38
Villa Grove.....	1			1					1		3		3
Virgen.....	29	4	20	2			3		29	4	132	71	61
Virginia.....	8	1	6	1					8		27	13	14
Waddams.....	1		1						1		1		1
Warren.....	7		6	1					7		20	7	13
Washington.....	1	1							1		134	80	54
Waterloo.....	3	1	1				1		3		25	21	4
Watseka.....	22	3	16	1			1	1	22		111	56	55
Watterman.....	3		1	2					3		10	3	7
Waukegan.....	4		4						4	2	442	169	273
Wenona.....	2		2						2		8	3	5
West Chicago.....	2	1		1					2		108	99	9
Wheaton.....	4	1	2	1					4		28	10	18
Whitehall.....	9	3	6						9		178	155	23
Wilmington.....	19	1	14	1			3		19		75	38	37
Winslow.....	5	1	3	1					5		18	9	9
Witt.....	4		3				1		4		11	6	5
Woodstock.....	27	3	20	2			2		27	13	2,388	2,109	280
Wyoming.....	5	1	2		1		1		5		19	11	8
Grand total.....	5,871	1,155	3,727	267	48	12	526	136	5,871	2,034	147,749	110,225	37,524





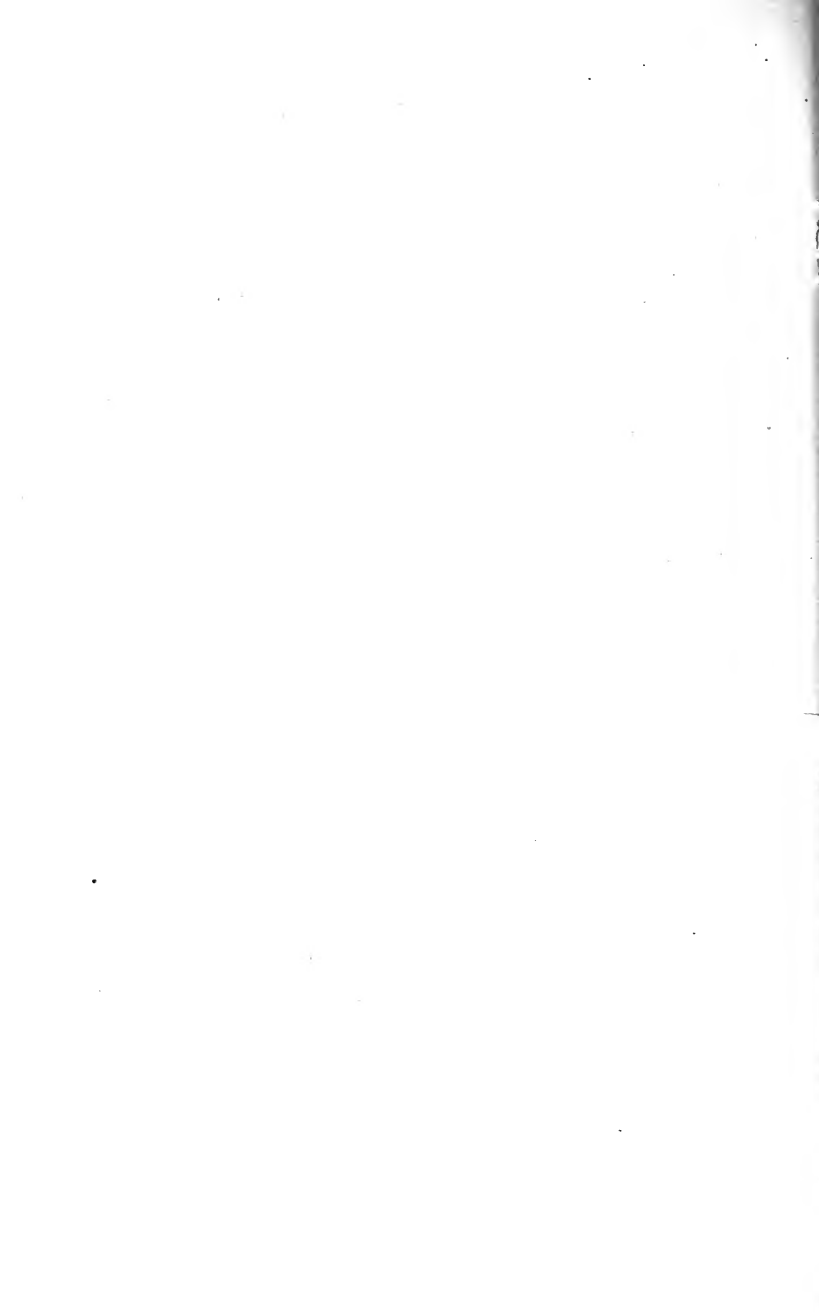
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# Garment Law

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## CHILD LABOR IN THE GARMENT TRADE.

Child labor has decreased appreciably within the last six or seven years. There are many shops that no longer employ children under 16 years of age, and the department aims to show a decrease in the regular employment of children during the coming year.

Three years ago one factory was employing between 40 and 50 children. A recent inspection showed that only five children under 16 years of age were employed. The management advised that in the future no children under the age of 16 years would be hired under any circumstances.

A total of 2,133 establishments were visited, involving 2,516 inspections. The number of girls employed between the ages of 14 and 16 was 1,487, while only 514 boys were employed.

In cities and towns outside of Chicago and Cook County 329 inspections were made in 284 establishments. In these, 145 girls were found and but 43 boys, the percentage of children being 2.8 per cent of the total persons employed.

In the entire State of Illinois 2,845 inspections were made, covering 2,417 establishments.

TABLE NO. 1—RESULTS OF INSPECTIONS ACCORDING TO THE PROVISIONS OF THE GARMENT LAW JULY 1, 1916, TO JUNE 30, 1917.

Number establishments visited.	First.	Second.	Night.	Total.	Males over 16 years.	Females over 16 years.	Boys 14 to 16.	Girls 14 to 16.
196	196	.....	.....	5,090	2,077	2,804	26	183
152	152	4	.....	6,482	2,443	3,786	135	138
147	147	6	.....	6,434	2,731	3,585	53	85
187	187	12	.....	5,504	2,160	3,122	77	145
175	175	8	.....	2,801	1,070	1,610	17	104
151	151	31	18	2,056	912	1,071	11	62
203	203	71	.....	5,747	2,812	2,809	34	92
193	193	22	.....	6,674	2,826	3,615	49	194
195	195	60	.....	6,123	2,022	3,819	24	258
176	176	36	.....	3,708	1,722	1,926	12	48
225	225	56	.....	9,841	5,286	4,337	59	159
133	133	77	.....	1,977	735	1,176	17	49
2,133	2,133	383	18	62,437	26,796	33,640	514	1,487

TABLE NO. 2—INSPECTIONS ACCORDING TO AN ACT TO REGULATE THE MANUFACTURE OF CLOTHING, WEARING APPAREL AND OTHER ARTICLES IN CHICAGO AND COOK COUNTY, JULY 1, 1916, TO JUNE 30, 1917.

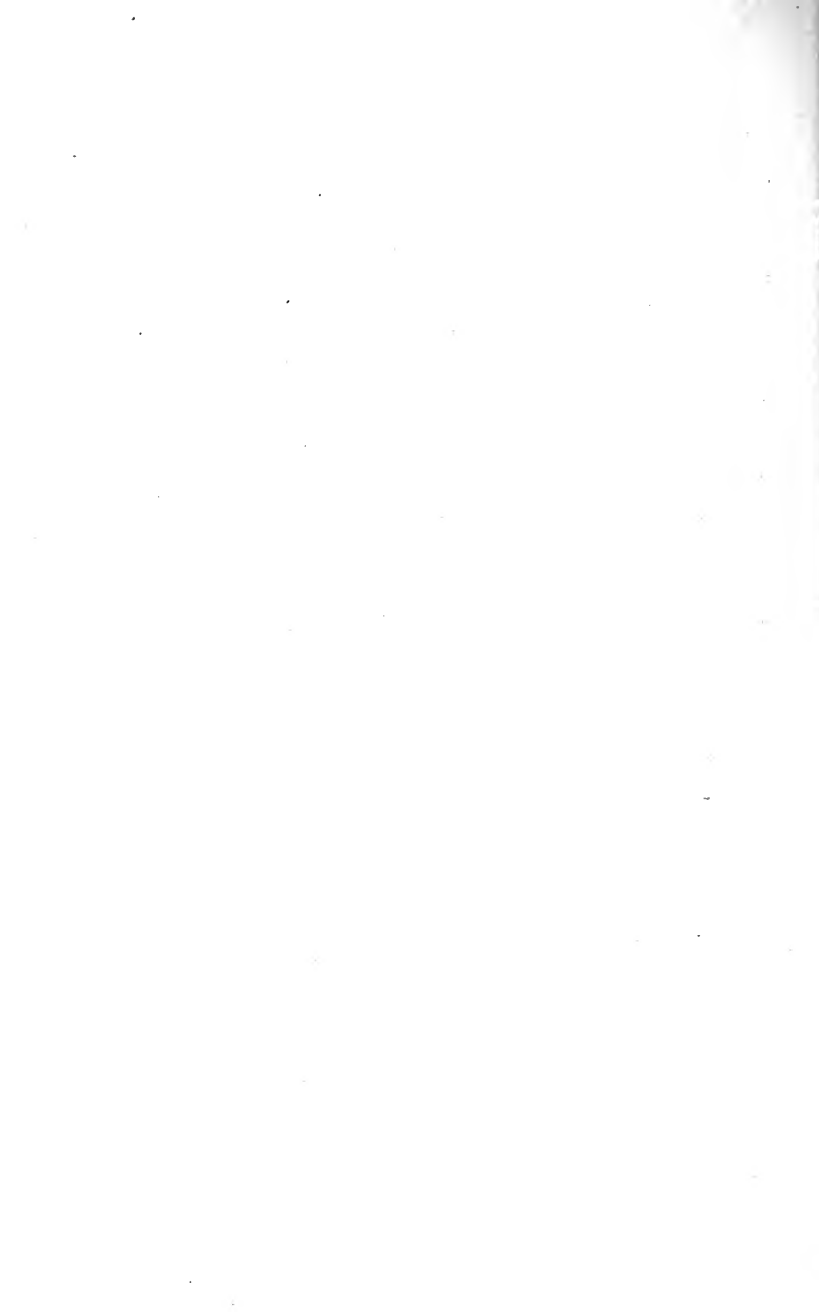
Month.	Artificial flowers.	Buttons.	Cigars.	Cleaning and dyeing.	Cloaks.	Clothing, miss and repairing.	Clothing, men's.	Clothing, women's.	Coats, pants, vests, kneepants.	Corsets and accessories.	Dressmakers.	Embroideries.	Furriers and featherers.	Gloves and mittens.	Hats and caps.	Hosiery and knite-goods.	Overalls.	Purses.	Shirts, collars, cuffs, neckwear, men's.	Shirt waists.	Skirts.	Total.	Home finishers.
1916																							
July.....	1	16	2	64	44	22	25	3	7	2	3	3	3	3	3	3	3	3	3	3	3	196	..
August.....	1	25	1	54	16	22	27	3	2	2	2	2	2	2	2	2	2	2	2	2	2	152	..
September.....	1	8	1	78	12	19	19	3	1	1	1	1	1	1	1	1	1	1	1	1	1	143	..
October.....	3	10	5	63	34	33	33	1	3	3	3	3	3	3	3	3	3	3	3	3	3	187	..
November.....	5	1	5	6	70	20	32	3	3	3	3	3	3	3	3	3	3	3	3	3	3	175	..
December.....	4	1	12	1	3	77	12	19	3	4	4	1	1	1	1	1	1	1	1	1	1	151	..
1917																							
January.....	1	5	8	7	89	20	44	1	7	4	1	7	3	3	3	3	3	3	3	3	3	203	..
February.....	1	3	9	87	22	45	1	7	1	1	1	1	1	1	1	1	1	1	1	1	1	193	..
March.....	2	1	5	7	75	29	24	6	2	4	1	1	1	1	1	1	1	1	1	1	1	195	..
April.....	1	1	6	69	24	35	1	5	1	1	1	1	1	1	1	1	1	1	1	1	1	176	..
May.....	1	3	5	117	13	52	6	6	3	2	2	2	2	2	2	2	2	2	2	2	2	223	..
June.....	2	1	3	9	59	9	17	2	3	3	2	2	2	2	2	2	2	2	2	2	2	133	..
Total.....	18	6	65	6	17	159	880	233	372	19	62	26	4	37	82	35	7	1	24	26	48	2,127	4

TABLE NO. 3—INSPECTIONS UNDER GARMENT LAW IN CITIES AND TOWNS OUTSIDE OF CHICAGO AND COOK COUNTY.

	Number of establishments visited.	Inspections.		Employees.					Per cent children to total employed.
		First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys, 14 to 16.	Girls, 14 to 16.	
Aledo.....	2	2		5	1	4			
Aurora.....	11	11	11	813	80	697	3	33	4.4
Batavia.....	1	1		19	1	18			
Beardstown.....	3	3		8	3	5			
Belleville.....	14	14	7	356	63	278	3	12	4.2
Beloit.....	1	1		103	30	73			
Belvidere.....	1	1		5	1	4			
Blandinsville.....	1	1		4	4				
Bloomington.....	1	1		35	5	30			
Braidwood.....	1	1		2	1	1			
Cambridge.....	1	1		2		2			
Champaign.....	7	7		52	28	24			
Charleston.....	5	5		29	10	19			
Chatsworth.....	1	1		1		1			
Decatur.....	1	1		121	19	102			
Dixon.....	2	2		6	1	4	1		16.7
East St. Louis.....	8	8		80	43	37			
Edwardsville.....	3	3		36	8	28			
Elgin.....	4	4		271	59	194		18	6.6
Freeport.....	10	10		238	40	198			
Galena.....	2	2		33	24	9			
Galva.....	1	1		3	1	2			
Gillespie.....	2	2		3	1	2			
Gilman.....	2	2		11	11				
Granite City.....	1	1		2	2				
Greenup.....	2	2		4		4			
Highland.....	1	1		60	20	33		7	11.7
Hillsboro.....	1	1		2	2				
Hoopeston.....	2	2		13	4	9			

TABLE NO. 3—Concluded.

	Number of establishments visited.	Inspections.		Employees.					Per cent children to total employed.
		First.	Second.	Total.	Males over 16 years.	Females over 16 years.	Boys, 14 to 16.	Girls, 14 to 16.	
Jerseyville.....	3	3	.....	277	177	99	1	.....	.4
Joliet.....	114	36	.....	114	36	78	.....	.....	.....
Kankakee.....	805	409	.....	805	409	349	12	35	5.8
LaSalle.....	10	6	.....	10	6	1	3	.....	30.
Lincoln.....	15	13	.....	15	13	2	.....	.....	.....
Litchfield.....	10	6	.....	10	6	4	.....	.....	.....
Lockport.....	7	6	.....	7	6	1	.....	.....	.....
Macomb.....	9	4	.....	9	4	.....	.....	.....	.....
Marshall.....	1	.....	.....	.....	.....	.....	.....	.....	.....
Martinsville.....	2	2	.....	2	2	.....	.....	.....	.....
Mascoutah.....	2	2	.....	2	2	.....	.....	.....	.....
Mattoon.....	14	4	.....	14	4	12	.....	.....	.....
Mendota.....	6	4	.....	6	4	1	.....	.....	.....
Moline.....	9	9	.....	9	9	161	1	.....	16.7
Monmouth.....	7	7	4	68	28	39	1	.....	1.5
Mt. Olive.....	2	2	.....	2	2	.....	.....	.....	.....
Mulberry Grove.....	2	2	.....	2	2	.....	.....	.....	.....
New Athens.....	2	2	.....	2	2	1	.....	.....	.....
Newton.....	1	1	.....	1	1	4	.....	.....	.....
Oblong.....	4	4	.....	4	4	8	.....	.....	.....
Oglesby.....	2	2	.....	14	3	11	.....	.....	.....
Ottawa.....	10	10	.....	257	108	143	2	4	2.3
Paris.....	2	2	.....	36	8	28	.....	.....	.....
Paxton.....	1	1	.....	1	.....	.....	.....	.....	.....
Pekin.....	10	10	.....	114	94	19	1	.....	.9
Peoria.....	37	37	21	1,029	342	680	3	4	.7
Peru.....	1	1	.....	23	14	6	.....	3	13.
Plainfield.....	1	1	.....	2	.....	2	.....	.....	.....
Pontiac.....	2	2	.....	428	226	184	12	6	4.2
Quincy.....	24	24	2	635	144	483	.....	8	1.3
Springfield.....	20	20	.....	572	260	303	7	.....	1.6
Staunton.....	2	2	2	6	3	3	.....	.....	.....
Streator.....	5	5	.....	184	11	149	5	19	13.
Sycamore.....	1	1	.....	8	6	2	.....	.....	.....
Tuscola.....	1	1	.....	5	.....	5	.....	.....	.....
Utica.....	1	1	.....	4	4	.....	.....	.....	.....
Virden.....	3	3	.....	9	4	5	.....	.....	.....
Whitehall.....	1	1	.....	3	.....	3	.....	.....	.....
Wilmington.....	1	1	.....	2	.....	2	.....	.....	.....
Wyoming.....	2	2	.....	5	3	2	.....	.....	.....
Grand total.....	284	284	45	6,805	2,215	4,402	43	145	2.8



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## **Health, Safety and Comfort Law**

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## HEALTH, SAFETY AND COMFORT LAW.

The title of this law indicates its scope. It is one which often calls for considerable expenditure in complying with its provisions, particularly where the violations found by inspectors are the fault of wrong construction, improper placing of machines or the like.

Table 2, pages 55-57, lists number of "inspections" and number of "orders issued" in columns 1 and 2. Inasmuch as the Health, Safety and Comfort Law, because of its comprehensiveness, calls for particularly detailed work in inspections, some of the terms may be defined here.

The term "inspections" comprehends the critical and constructive work of the inspector who visits a plant, notes the degree of compliance with the law and recommends, for consideration by his chief, the approval, modification or elimination of conditions coming within the scope of the law.

Inspections are commonly classified as—

(1) New, or original, when made for the first time or after a radical change in ownership, policy of the business inspected, or the like.

(2) Re-inspections—a "follow-up" or check-up—to see if orders issued have been complied with.

(3) Investigation of old orders, embracing inspections not falling in either of the above classes.

The term "order" designates any specific requirement set forth that the law may be complied with. An inspection may cover one or many orders.

### "SAFETY FIRST" CAMPAIGNS.

Many progressive manufacturers have worked ahead of legislation in an attempt to make "industry safe for the worker." Designers of new machines have borne the safety idea in mind. The various states have enacted legislation requiring safety as a basis for working conditions. These and other contributing causes have brought about the "Safety First" campaign, an important part in securing adequate protection for those who toil.

We are indebted, through the courtesy of one of our largest manufacturing plants, for the following series of photographs, taken by the department's photographer which we reproduce below.

Figure No. 1 illustrates what a foundry can be under intelligent supervision and cooperation between manager, foremen and employees.

The following letter from the safety inspector of the plant from which the above series of views were taken is self explanatory:

"The picture of large band saw equipped with safety appliances is in our wood shop, which has an average of 378 employees for the past ten months (September to June, inclusive); during that period there were twelve accidents, only one of which was of a serious character, an infection resulting from a sliver, the others caused loss of employment of from 14 days down to one, and no case resulted in permanent disability or disfigurement. This in view of the fact that work done in this department is accomplished with high speed machinery, saws, planers, shapers, jointers, roller lathes and other hazardous machinery. We feel that much of this success is due to the hearty cooperation of our employees, which is partially brought about in this manner; all of the guards and safety appliances were made and installed by a co-worker of the men in this department, his fellow workers placed every confidence in his ability as a mechanic and they had the privilege of suggesting how they wished the guards to be made; of course, they were held to limits by the safety department.



Fig. 1. Ideal foundry.

"The photographs of moulders taken in our malleable foundry, which had an average of 1,000 employees for the past three months, (April, May and June). During that period only four accidents took place; the most serious being a swollen ankle, foot or leg burns from molten metal being entirely absent. When one considers that 160 tons of molten metal is poured in 50 pound ladles every day, we have reason to believe that this good result is brought about through the cooperation of foremen and employees in keeping gangways, furnaces and ladles in good condition, the furnishing of leggings and insisting on them being worn in proper position."

The above letter needs no extended comment and we feel safe in saying that the statement of Ruskin that: "Cooperation is always and everywhere the law of life; competition is always and everywhere the law of death." holds good in manufacturing establishments.

## THE USE OF SIGNS.

With the development of the specialty business there has been a striking increase in the production of signs of every possible kind, quality and wording. No longer is it necessary for the foreman to instruct someone who is reasonably skillful in lettering to make up a sign for some general or special purpose. Manufacturers have shown great originality and adaptability in introducing a line of striking signs which cover almost every trade and every possible condition or contingency which can arise with connection to safety first education and enforcements. Special attention has also been paid to producing signs which are not only readable, but are because of their striking coloring easily read at some considerable distance.



Fig. 2. Pouring a heat.

By selecting the right kind of material it is possible to procure a sign which is practically indestructible. A metal sign with a specially prepared resistance covering is manufactured, which is proof against ordinary wear and tear, and will stand any customary degree of heat or cold without depreciating.

A list of subject matter covered by various manufacturers of signs is given below. The manufacturer who has not already done so will find it to his advantage to procure the catalogues of the leading manufacturers of signs.

One of the methods very essential in safety first work is the use of movable signs. These are an outgrowth of the old method of placing a red flag in places about a shop to indicate danger. A holder of some form is made, this being mounted upon a suitable upright, the whole

being kept in place by means of crosspieces which insure the stability of the sign.

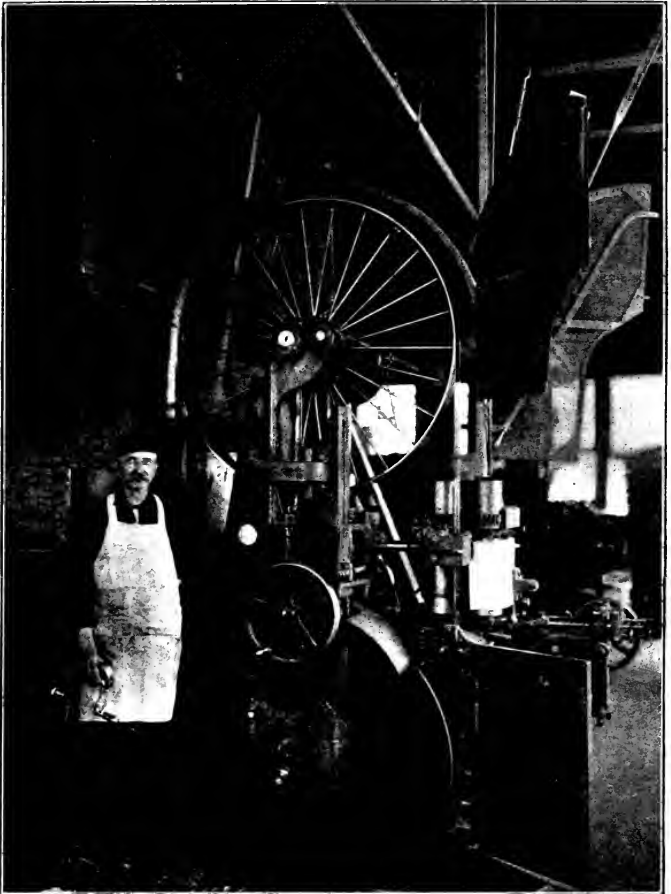


Fig. 3. Band saw with guard open, portrait of designer of the guard.

#### DO'S AND DONT'S—SAFETY FIRST RULES.

Keep away from all machinery to which your duties do not call you.  
Keep away from all departments where you have no business.

You must not hold conversation with machine operators while they are performing their duties.

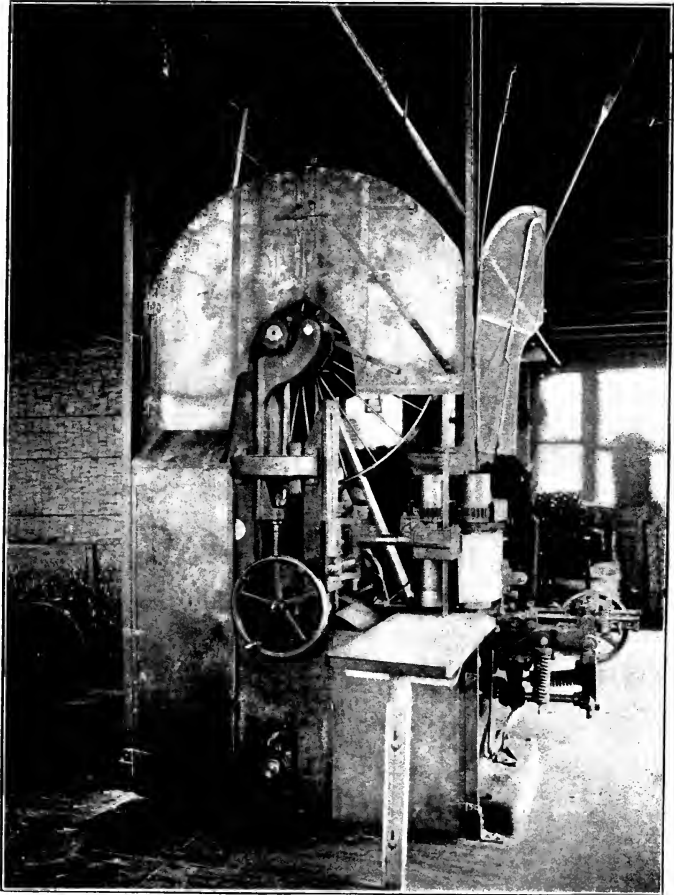


Fig. 4. Band saw in figure 3 with guards closed.

Examine your machinery critically at all times for defective and dangerous parts. Report to foreman at once any defective part observed.

The toilets, wash basins and latrines are kept clean for your safety. See that you leave them in as clean a condition as you find them.

Do not touch, or attempt to clean or adjust any part of machinery while in motion.

Goggles should be worn by the electrical worker when working on switchboard and live wires, also by carpenters and painters when doing any work on ceiling to prevent foreign substances from entering the eyes.

The use of intoxicating liquors, being a menace to the plant, and to the safety of it, any person reporting for work under the influence of liquor or caught with liquor on his person will be discharged.

Eternal vigilance is the price of safety.

One think before an accident is worth a million thinks afterwards. Think before you act—Be safe.

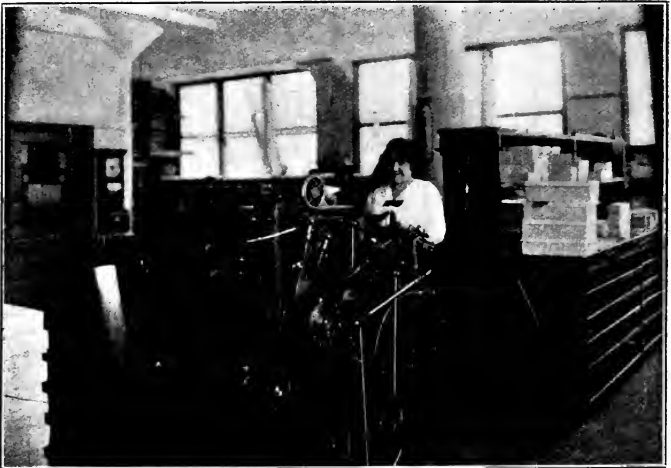


Fig. 5. Guarded automatic printing press.

Practice safety yourself; others will follow you. Eighty thousand workmen in this country are blind. Their eyesight was lost because their eyes were not properly protected. Would it not be safer and wiser to wear safety goggles and perhaps incur a little temporary inconvenience rather than be blind for life.

To-morrow is unborn—Yesterday is dead—To-day is yours—for safety.

“Safety First” is the exercising of ordinary care and the elimination of the habit of taking any unnecessary chances.

Most men are quick to see possibility of an accident to another, but take unnecessary chances themselves.

Any machinery that is stopped for cause or repairs should have danger sign prominently displayed.

Men should not wear dangling sleeves, flowing neckties or other loose clothing where there is a chance of coming in contact with machinery in motion. Wear your jumpers buttoned under bib and suspenders of your overalls.

#### SIGNS FOR MINE WORKINGS.

Ladderway to twelfth level.

To main shaft (with arrow pointing).

To timber shaft (with arrow pointing).

#### SIGNS FOR SHAFT STATIONS.

Do not ring to move cage or skip when men are working in shaft or sump.



Fig. 6. Female operator on Gordon press.

Not more than eight men permitted to ride in cage.

Cage doors must be closed when men are being handled.

#### SIGNS FOR PUMP STATIONS.

Keep oily waste in receptacle provided.

Employees are forbidden to travel slope while trip is in motion.

Wrestling, pushing, or crowding positively prohibited.

#### WARNING.

Before raising or lowering spouts on ore docks, wait for signal from the man down at the platform. Before releasing brake see that the man driving pin is out of spout and on platform.

Remember that it takes less time to prevent an accident than it does to report it.

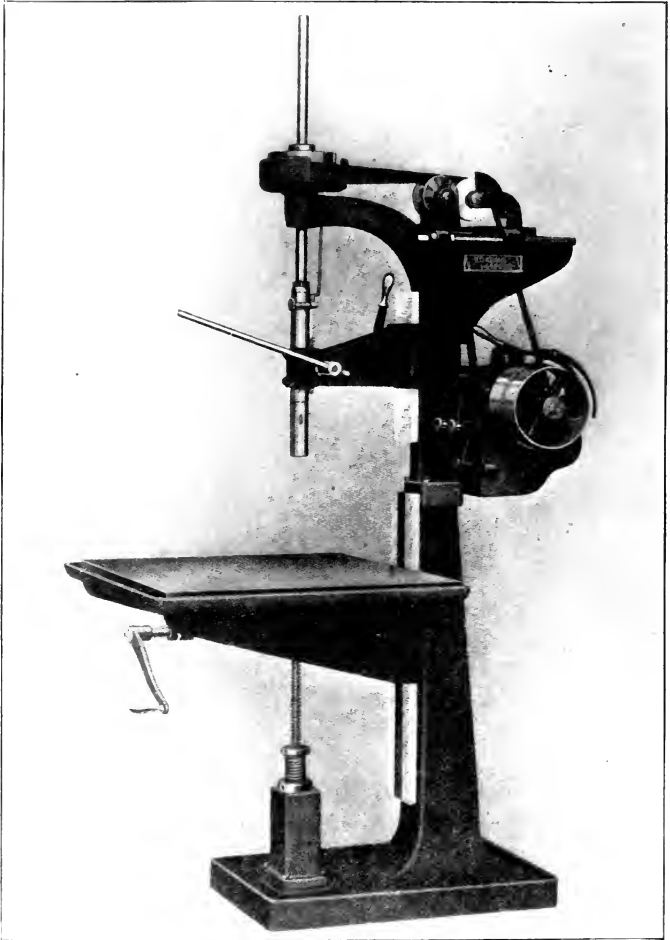


Fig. 7. Spindle drill press with spindle pulley and belt guard.

NOTICE.—No employee under any circumstances shall go upon crane runways or close thereto, for any purpose.



## WARNING.

Do not go into tunnel without permission of switch tender. Notify switch tender when you are through tunnel. Keep moving, do not stop and talk to anyone in tunnel. Watch and listen, use great care for your safety.

## DANGER.

Dangerous current. Anything touching these wires and poles may result in death. If work is such that materials or tackle is liable to accidentally touch poles or wire STOP WORK.

Don't fool with electricity. It's a fool-killer.

Warning—Do not ride on engine, cars, cranes, or other moving bodies, except when required by your duties.

Do not take short cuts over or through dangerous places. Take time to be safe.

Stop machine before oiling, wiping, or repairing it, and don't try to operate a machine you do not understand.

Remember it is better to cause a delay than to cause an accident.

Never try to shift a moving belt by hand.

Never go between or reach between large fast moving belts.

## CRANES.

Look where you are going. Keep from under loads carried by cranes.

In moving material be sure the chains and hooks are of sufficient capacity and that the load is safely "hooked up."

When operator leaves his cage he must pull main switch. Workmen must test their safety switch before working on a crane.

Be on the lookout while in this yard for cranes and piles of iron. Something may cause any pile to fall.

## SAFETY SIGNS.

## RULES TO PREVENT ACCIDENTS.

Each employee should know every rule; be watchful and report everyone whose carelessness is apt to injure himself or others. Get rules at safety department.

No employee is permitted to remove guards or operate machines without them.

Notice to men seeking employment. Unless you are willing to be careful to avoid injury to yourself and fellow workmen, do not ask for employment. We do not want careless men in our employ.

Danger—Do not cross the tracks.

Don't handle acid without wearing eye guards.

Don't touch, keep away.

Don't clean stamps while power is on.

## WARNING.

Employees working around engines, moving or revolving, machinery, shafting, etc., are warned against the danger and are prohibited from wearing loose or unbuttoned jackets, blouses, shirts, torn clothing, long neckties, etc.

### FOUNDRY SIGNS.

Danger—Do not ride on ladle cars.

Foundrymen and others are strictly forbidden to carry gasoline in open vessels.

Before tapping an open hearth furnace, the furnace shall be reversed and the first helper shall look and see if metal is working, etc.

You must not go anywhere above the floor around a blast furnace without first telling the general foreman or the blower of that furnace.

## **"SAFETY FIRST"**

### **WHO COMES HERE?**

I am more powerful than the combined armies of the world.

I have destroyed more men than all the wars of the world.

I am more deadly than bullets, and I have wrecked more homes than the mightiest of siege guns.

I steal, in the United States alone, over \$300,000,000.00 each year.

I spare no one, and I find my victims among the rich and poor alike; the young and old; the strong and weak; widows and orphans know me.

I loom up to such proportions that I cast my shadow over every field of labor from the turning of the grindstone to the moving of every railroad train.

I massacre thousands upon thousands of wage earners in a year.

I lurk in unseen places, and do most of my work silently. You are warned against me, but you heed not.

I am relentless. I am everywhere; in the home, on the street, in the factory, at railroad crossings, and on the sea.

I bring sickness, degradation and death, and yet few seek to avoid me.

I destroy, crush, maim, take all and give nothing.

I am your worst enemy.

### **I AM CARELESSNESS**

Fig. 8. Safety first slogan.

When pouring metal you must wear goggles to protect your eyes. Get them from the foreman.

#### NOTICE.

It is dangerous around blast furnaces, because of gas, slips, and breakouts. This cannot always be guarded against by those in charge.

#### SIGNAL CODE.

One long whistle—Furnace casting.

Four short whistles—Check to 12,000 cubic feet.

Three short whistles—Snorting valve closed, watch engine.

Two short whistles—stop—7,000 cubic feet.

One short whistle—full blast.

#### FOUNDRYMEN—AVOID BURNS.

You are requested to wear Congress shoes and Jean pants which will shed molten iron. These may be obtained from the company at cost. Ask your foreman. Goggles are furnished free by the company and must be worn when pouring off.

Danger—Keep away from vessels when first heat is blowing on a new bottom, also when bell rings as vessel is being scraped.

#### RAILROAD SIGNS.

Do not move this car. Men working inside.

Men working on line. Don't throw switch.

Not room enough here to clear man on side of car.

#### DANGER.

Piles along this track will not clear man on side of car.



# Always Be Careful

Fig. 9. Safety first slogan.

#### INDUSTRIAL SIGNS AND SLOGANS.

Let every employee make himself a committee of one to prevent some ONE accident.

Do not work with unsafe tools. Tell your foreman.

The proper inspection of tools and machinery, by employees using same, will help to prevent accidents.

We will welcome suggestions from employees on anything of a dangerous nature.

Beware of blood poisoning. A wire scratch will cause it sometimes.

When you see a Red Ball, stop, look around.

Don't think that rules are made to inconvenience YOU.

When you're reckless you're wrong—get right.

Carelessness costs you nothing and its value cannot be measured.

It is better to play safe a thousand time than to be caught once.

The company tries to protect you. Have you done your share to help?

When in doubt, remember "Safety First."

Looking out for the other fellow makes it safe for everyone.  
A bed at home is worth two in the hospital.

### SAFETY MUSEUM.

The department maintains for the purpose of showing employers and managers of plants a room for the display of safety devices for machinery that requires to be guarded, also a collection of photographs, blue prints and sketches. One section being devoted to occupational diseases which contains a very complete collection of the various poisonous substances used in the industries of this State.

The contents of are listed below:

#### *Guards for Dangerous Machinery.*

Wire belt guards, 2 types.	Elevator automatic safety door lock, working model.
Grip nuts, 3 types.	Trip hammer guard, working model.
Jointer guards, 3 types.	Safety dogs, 4 exhibits.
Punch press guards, 2 types.	Friction clutch, working model.
Shaper guard, working model.	Countersunk set screws, 2 styles.
Circular saw guards, 2 working models.	Water gauge guards, 2 working models.
Safety signs, 3 kinds.	
Belt shifter, working model.	

#### *Devices for Structural Work.*

Painter's scaffold, model.	Safety rope net, model.
Tuckpointer's scaffold, 2 models.	Metal hose, exhibit.
Safety caisson device, model.	

#### *Wash Room Equipment.*

Disinfecting machines, 4 styles.	Water closet with high water tank, model.
Drinking fountain, model.	Liquid soap containers, 2 styles.
Shower bath, model.	Drinking cup holder, model.
Enameled trough, 6-foot fitted with 6 hot and cold spigots, model.	

#### *Metal Polishing Devices.*

Model of wheels, suction pipes, fan and dust collector.	Emery wheels, 2 types, working models.
Model of dust collector.	

#### *Other Exhibits.*

Safety ladder, model.	Safety collars, exhibits.
Safety stair treads, model.	Fire extinguishers, 3 designs:

#### *Photographs.*

296 views of guarded and unguarded machinery in connection with the requirements of the Health, Safety and Comfort Law.	8 views relating to the garment trade.
109 view of safety devices and improved working conditions in the building trade as required by the Structural Safety Law.	16 views showing child labor conditions.
18 views illustrating wash rooms installed as required by the Wash House Law.	24 views of metal polishing shops showing facilities as ordered under the Blower Law.
	5 views of first aid rooms.

These exhibits are open to the public every day (except Sunday) from 9 a. m. until 5 p. m., Saturdays 9 a. m. to 12 m.

## INSPECTIONS.

The following table presents the number of inspections made while enforcing the provisions of the "Health, Safety and Comfort Law" and gives the number and kinds of orders issued to correct defective or dangerous conditions.

In Chicago and Cook County 2,793 inspections were made, and 19,290 orders issued. Of these orders issued 11,129 were for guarding of dangerous machinery or dangerous machinery parts.

Outside of Chicago and Cook County, 2,566 inspections were made and 11,636 orders issued.

TABLE NO. 1—RESULTS OF INSPECTIONS ACCORDING TO THE HEALTH, SAFETY AND COMFORT LAW FROM JULY 1, 1916, TO JUNE 30, 1917.

	Total number of inspections.	Out of business.	New orders issued	Previous orders complied with.	Previous orders checked up.	Number of male employees.	Number of female employees.	Items complied with	Building.	Sanitation.	Power.	Dangerous machinery.	Dangerous machinery parts.	Total number of orders issued.
Chicago and Cook County.....	2,793	122	1,822	491	358	106,936	37,842	7,055	2,725	2,647	2,789	726	10,403	19,290
Outside of Chicago and Cook County.....	2,566	92	1,111	1,157	206	80,295	9,352	14,304	980	774	1,150	398	8,334	11,636
	5,359	214	2,933	1,648	564	187,231	47,194	21,359	3,705	3,421	3,939	1,124	18,737	30,926

Table No. 2 shows number of towns and cities outside of Chicago and Cook County visited and the number of inspections, the number of orders issued and the number of employees both male and female. This list does not include many towns visited where all orders had been complied with and no further were necessary.

TABLE NO. 2

City or town.	Number of inspections.	Number of orders issued.	Number of employees—		
			Total.	Males.	Females.
Abingdon.....	1	18	96	91	5
Alton.....	3	77	212	210	2
Algonquin.....	1	8	17	17	.....
Anna.....	4	44	434	221	213
Ashley.....	1	8	7	7	1
Ashkum.....	2	56	4	4	.....
Aurora.....	9	72	502	478	24
Batavia.....	3	127	432	420	12
Beardstown.....	5	32	845	834	11
Belleville.....	26	184	1,288	1,171	117
Beloit.....	2	7	125	119	6
Belvidere.....	2	12	13	13	.....
Boyer Siding.....	1	22	2	2	.....
Bradley.....	4	172	399	396	3
Buckley.....	1	24	2	2	.....
Brookport.....	2	17	12	12	.....
Cairo.....	24	198	1,008	932	76
Cameron.....	1	7	9	9	.....
Canton.....	5	32	1,559	1,476	83
Carlyle.....	2	.....	.....	.....	.....

TABLE NO. 2—Continued.

City or town.	Number of inspec- tions.	Number of orders issued.	Number of employees—		
			Total.	Males.	Females.
Carpentersville.....	3	83	561	556	5
Carrollton.....	1				
Casey.....	4	10	18	14	4
Chadwick.....	3	15	6	6	
Champaign.....	29	104	483	403	80
Charleston.....	10	30	134	124	10
Chatsworth.....	3	22	18	18	
Chebanse.....	1				
Chester.....	5	2	140	15	125
Coffeen.....	2	6	4	4	
Collinsville.....	1	13	250	250	
Columbia.....	1				
Coultersville.....	3				
Crystal Lake.....	3	20	41	41	
Danville.....	10	21	675	658	17
Decatur.....	6	39	13	12	1
DeKalb.....	1	7	72	72	
Delrey.....	2				
DePue.....	1	2	6	6	
Dixon.....	1	20	110	106	4
DuQuoin.....	5	10	23	21	2
Dwight.....	1	6	28	27	1
East St. Louis.....	8	36	1,351	1,309	42
Edwardsville.....	8	43	394	381	13
Elgin.....	17	194	787	546	241
Elliot.....	1	7	1	1	
Elmhurst.....	1				
Exline.....	2	39	4	4	
Faithorn.....	1	1	20	20	
Fairview Landing.....	1	26	144	144	
Forrest.....	2	16	3	3	
Forrester.....	2	14	15	14	1
Freeburg.....	3				
Freeport.....	7	56	181	174	7
Fulton.....	1	6	51	25	26
Galena.....	6	31	107	104	3
Galesburg.....	11	235	1,675	1,588	87
Galva.....	5	70	325	309	16
Genoa.....	3	8	58	34	24
Genoa.....	1				
Goodrich.....	1	18	2	2	
Granite City.....	4	6	2,397	2,376	21
Grays Lake.....	1	8	35	35	
Greenup.....	1	2	2	2	
Greenville.....	1	1	4	3	1
Harvard.....	5	32	421	392	29
Highland.....	7				
Hillsboro.....	5	7	14	5	9
Hoopeston.....	8	25	384	327	57
Huntley.....	2	5	37	37	
Jacksonville.....	4	68	608	371	237
Jerseyville.....	3	11	17	17	
Joliet.....	65	677	7,242	6,673	569
Juda.....	1	23	2	2	
Kankakee.....	23	33	132	44	88
Kewanee.....	3	26	55	55	
Kingston.....	2				
Lanark.....	4	13	5	5	
LaSalle.....	1	2	10	10	
Lebanon.....	1				
Litchfield.....	9	20	367	362	5
Lockport.....	3	29	291	208	83
Lombard.....	1	3	3	3	
Lostant.....	1	1	3	2	1
Macomb.....	5	26	231	230	1
Madison.....	7	42	2,254	2,253	1
Marengo.....	7	29	34	29	5
Marissa.....	2	8	12	11	1
Marshall.....	2	25	618	568	50
Marshall.....	7	30	22	18	4
Martinsville.....	1	11	5	5	
Mascoutah.....	2	6	6	6	
Mattoon.....	26	112	1,068	984	84
Mendota.....	1	6	1	1	

TABLE NO. 2—Concluded.

City or town.	Number of inspections.	Number of orders issued.	Number of employees—		
			Total.	Males.	Females.
Metropolis.....	4	66	311	303	8
Milford.....	1				
Milledgeville.....	2	9	3	3	
Moline.....	29	374	6,420	6,042	378
Monmouth.....	12	261	717	682	35
Mound City.....	3	44	174	174	
Mounds.....	1	3	258	257	1
Mulberry Grove.....	2				
Naperville.....	4	13	421	405	16
New Athens.....	6	72	99	99	
Noble.....	2	17	35	13	22
Oakland.....	2	6	5	5	
Oblong.....	4	17	12	11	1
O'Fallon.....	1	4	4	4	
Oglesby.....	1	1	400	400	
Onarga.....	2				
Oregon.....	7	47	280	266	14
Ottawa.....	11	73	803	767	36
Pana.....	7	36	19	19	
Panola.....	2	4	2	2	
Paris.....	10	13	276	195	81
Paxton.....	2	8	17	11	6
Pekin.....	3	8	20	19	1
Peoria.....	34	339	2,635	2,332	303
Peru.....	5	38	402	394	8
Percy.....	2	17	29	29	
Perry Springs.....	1	4	2	2	
Pittsfield.....	1	3	7	5	2
Polk.....	1	23	2	2	
Pontiac.....	4	16	16	11	5
Quincy.....	24	294	1,854	1,703	151
Reddick.....	2	50	4	4	
Ringwood.....	1	4	30	30	
Rochelle.....	4	62	212	171	41
Rock Falls.....	1	21	28	27	1
Rock Island.....	10	85	1,060	1,034	26
Rockford.....	73	2,135	8,513	7,463	1,050
Robinson.....	11	56	78	73	5
Romeo.....	1				
Rondout.....	1				
Roodhouse.....	4	13	378	376	2
Rosiclare.....	1	13	182	182	
Rossville.....	1				
Rushville.....	4	30	13	12	1
Savanna.....	4	24	350	346	4
Sparta.....	3	14	89	88	1
Springfield.....	70	212	1,532	1,164	368
St. Augustine.....	1	1	2	2	
St. Charles.....	8	50	537	480	57
Staunton.....	3	7	7	4	3
Steelville.....	2	9	19	18	1
Stockdale.....	2	19	18	18	
Streator.....	13	93	1,314	1,256	58
Sycamore.....	2	7	56	27	29
Tamaroa.....	1				
Tamms.....	1	9	23	22	1
Tilton.....	1	6	179	179	
Tonica.....	2				
Toulon.....	1	11	2	2	
Trenton.....	2				
Tuscola.....	3	7	11	9	2
Union.....	1	2	34	30	4
Union Hill.....	3	38	5	5	
Utica.....	2	14	103	100	3
Waterloo.....	5	18	64	61	3
Watseka.....	1	7	5	5	
West Chicago.....	2	13	163	161	3
Weeaton.....	3	24	73	73	
Wilson.....	2	49	4	4	
Wilmington.....	1	5	3	3	
Woodstock.....	1	3	8	3	5

ANALYSIS OF ALL ORDERS UNDER THE HEALTH, SAFETY AND COMFORT ACT  
JULY 1, TO JUNE 30, 1917.

Classification of all orders.	City and Cook County.	State outside Cook County.	Total.
<b>I. Building—</b>			
1. Exits and fire escapes.....	87	34	121
2. Doors, slide and roll.....	22	7	29
3. Stair treads.....	292	65	357
4. Handrails and toeboards.....	416	500	916
5. Openings in floors.....	75	78	153
6. Elevators, automatic gates and slant boards.....	621	104	725
7. Elevator cars.....	438	92	530
8. Safety devices.....	3	8	11
9. Proper light.....	490	22	512
10. Heating systems.....	1		1
11. Passageways and obstructions.....	244	37	281
12. Dangerous places.....	36	33	69
	<b>2,725</b>	<b>980</b>	<b>3,705</b>
<b>II. Sanitation—</b>			
1. Toilets.....	1,082	348	1,430
2. Washing and dressing rooms.....	1,002	173	1,175
3. Seats for females.....	56	11	67
6. Proper ventilation.....	8	9	17
7. Remove dust and fumes.....	383	178	561
8. Rooms, clean, dry and sanitary.....	64	28	92
9. Install or guard fans or blowers.....	48	23	71
10. Guard ovens, furnaces, vats, pans, etc.....	4	4	8
	<b>2,647</b>	<b>774</b>	<b>3,421</b>
<b>III. Power—</b>			
1. Engine stops or disengaging devices.....	118	33	151
2. Signal systems.....	135	4	139
3. Belt shifters.....	254	40	294
4. Boiler and engine rooms.....	163	68	231
5. Clutches, couplings and weights.....	386	254	640
6. Switches and throttles.....	35	9	44
7. Dynamos and motors.....	50	12	62
8. Electric appliances and wiring.....	88	52	140
9. General orders.....	1,559	675	2,234
10. Eccentrics and crank shafts.....	1	3	4
	<b>2,789</b>	<b>1,150</b>	<b>3,939</b>
<b>IV. Dangerous Machinery—</b>			
1. Hydro extractors.....	30	11	41
2. Mangles, rolls, drums, crushers and tumblers.....	112	60	172
3. Band saws.....	141	50	191
4. Circular saws.....	300	165	465
5. Planers.....	10	12	22
6. Shapers.....	34	16	50
7. Jointers.....	74	28	102
9. Stickers and mortisers.....	7	11	18
10. Trip hammers, bulldozers and shears.....	7	27	34
11. Printing presses.....	4	2	6
11. Looms, spindles and shuttles.....	7	16	23
	<b>726</b>	<b>398</b>	<b>1,124</b>
<b>V. Dangerous Machinery Parts—</b>			
1. Flywheels.....	1,113	695	1,808
2. Punch and drill presses at point of work.....	172	13	185
3. Planer and shaper beds under platen.....	88	85	173
4. Pipe machines and turret lathes.....	9	1	10
5. Gears.....	1,533	2,079	3,612
6. Belts and pulleys.....	5,073	3,984	9,057
7. Sprocket chains and screw conveyors.....	268	169	437
8. Shafting and roll bearings.....	1,000	579	1,579
9. Exposed set screws and bolt keys.....	641	499	1,140
10. Emery wheels.....	471	209	680
11. Cranes.....	16	19	35
12. Cutters, feather and leather splitters.....	19	2	21
	<b>10,403</b>	<b>8,334</b>	<b>18,737</b>
<b>Total.....</b>	<b>19,290</b>	<b>11,636</b>	<b>30,926</b>



The following table shows the number of accident reports received by this office during the fiscal year:

Fatal accidents.	Nonfatal accidents.	Total.	Machinery.	Other causes.	Total.	Time lost—days.
82	913	999	373	622	995	21,963

#### ANALYSIS OF ACCIDENTS.

	Machinery.	Other causes.		Machinery.	Other causes.
<b>Head—</b>			<b>Legs—</b>		
Eyes ....	14	25	Ankle ...	5	27
Face ....	5	21	Feet ....	14	31
Head ....	21	32	Toes ....	3	23
Nose ....	2	1	Knees ...	1	9
	42	79	Thigh ...	2	9
			Legs ....	9	37
<b>Arms—</b>				34	191
Fingers ..	175	114	<b>Hernia—</b>		
Hand ....	54	64	Rupture .	2	15
Wrist ...	3	14		2	15
Arms ....	24	40			
	256	232	<b>Not stated—</b>		
			Not given.	17	24
<b>Body—</b>				17	24
Back ....	1	31	<b>Machinery accidents</b> .....		373
Chest and ribs ...	18	44	<b>Other causes</b> .....		622
Shoulder .	3	6	<b>Total</b> .....		995
	22	81			

#### VENTILATION.

Ventilation is the process of replacing foul air by that which is pure, in any inclosed place. There are many mechanical devices for doing this, all of them are good if properly installed so as to secure an even distribution of fresh air. In many instances systems are found installed in the corner of a room, or at the end, in neither case is any benefit derived. Again systems are found located close to a window, evidently with the idea of obtaining easy communication with the outside air, but the best results cannot be gained from such installation. The ideal location for ventilating systems being, where possible, on the side of the room away from the windows, this causes the fresh air to cross the room to the point of exit, thus realizing the best results from the system.

In making ventilation inspections many things have to be given consideration, viz. allowances have to be made where incandescent lights are used, or other lights that do not consume the oxygen in the air, such allowances cannot be made where gas lights or gas irons are used. In many cases the process of manufacture is such that exemption from the provision of the law is granted. The deputy inspectors find many different shaped and various sized rooms, some with skylights and many with posts, toilets, etc., all of these conditions tend to take up or reduce the cubical air space of the room under inspection and involve many intricate mathematical problems. Window spaces are those openings



Fig. 10. One of the cleanest shops in the State properly ventilated.

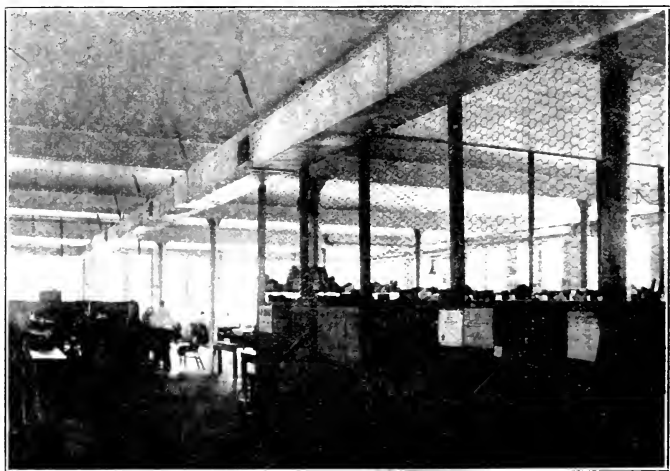


Fig. 11. Another view of the same factory as in figure 10.

that are in direct communication with the outside air, consequently they only make a difference in the amount of artificial ventilation to be furnished.

A few manufacturers are under the impression that artificial ventilation is not necessary in the summer as windows can be opened. The law, however, has two very specific provisions, one being for the supplying of fresh air during the season of the year when windows are not permitted to be open, and the other provides for artificial ventilation all the year round, in the enforcing of the latter provision the depart-

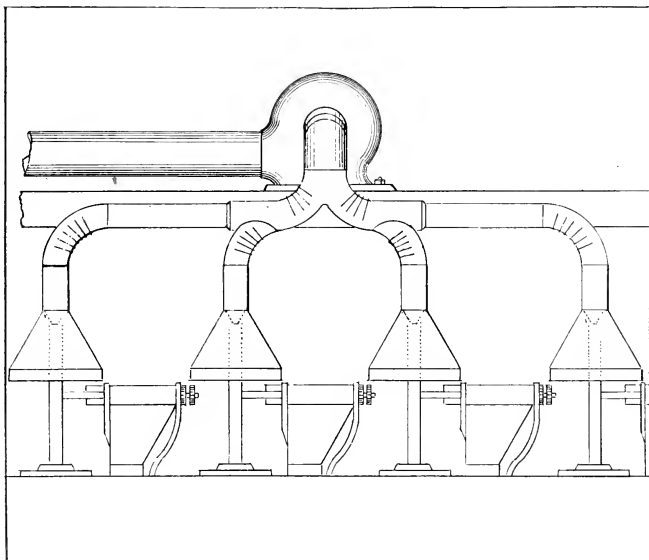


Fig. 12. Ventilating system for linotype machines.

ment is governed by the window space and the cubic feet of air space for each employee.

In making inspections few places employing six or more persons are found that are not what may be termed, "short on air space," and while many manufacturers considered the installation of ventilating systems, an expense without returns, the firms who have installed them find that they are more than compensated for the time formerly lost by employees through headache and fatigue, but also by an increased and better product.

In making ventilation tests it is very important to see that all windows are closed.

VENTILATION INSPECTIONS ACCORDING TO SECTION 11 OF THE HEALTH,  
SAFETY AND COMFORT ACT, JULY 1, 1916, TO JUNE 30, 1917.

	Number of estab- lish- ments visited.	Number of work- rooms in- spected.	Em- ployes.	Re-in- spec- tions.	Com- plied.	Order issued for—	
						1,500 cu- bic feet.	1,800 cu- bic feet.
Chicago and Cook County..	167	211	6,262	46	59	59	47

The above table shows the total results of the work accomplished by this department for the year ended June 30, 1917. Sixty-two first inspections were made of establishments containing 106 rooms requiring a careful measurement of these rooms by two inspectors, and involving many intricate mathematical problems. Forty-six re-inspections were made in which it was found that the orders previously issued had not been complied with; but in 59 cases absolute compliance with the requirements of this department had been secured, making a total of 167 establishments visited and the inspection of 211 work-rooms.

Only two inspectors have been engaged on this work and they have safeguarded the working conditions of 6,262 employees. In 59 cases they found it necessary to issue orders to provide for 1,500 cubic feet per hour of air to be supplied during the season when it is necessary to keep the windows closed, and in 47 instances orders had to be issued to supply 1,800 cubic feet per hour of fresh air all the year round.

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## **Wash House Law**

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## RESULTS OF INSPECTIONS ACCORDING TO THE PROVISIONS OF THE WASH HOUSE ACT.

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The Wash House Act is one of the laws enforced by the department which has met with complete—(though sometimes reluctant) compliance. Practically all businesses in the State, “in which,” to quote the law, “employees become covered with grease, smoke, dust, grime and perspiration,” have made provisions to “provide and maintain a suitable and sanitary wash room.”

Frequently, employers not only carry out the provisions of the law, but go beyond its requirements, installing wash-, dressing- and lunch-rooms where the worker can cleanse and dress among the most comfortable surroundings.

When an order is issued for the installation of a wash room in a business which has gotten along without adequate washing facilities for years, the employer often pleads that the facilities so provided will not be used. Particularly where workers are required to “wash on their own time,” this argument is advanced. Invariably, however, it is found that washing facilities, once provided, are eventually used—and appreciated by the workers. The department has yet to learn of a continuing instance of non-use of adequate washing facilities. Many instances on the contrary, have been noted where the cleanly influence of washing facilities at the factory or works has extended to the workers’ homes.

In Chicago and Cook County, 349 inspections were made under this law, where 32,738 men and women were employed. It was found necessary to issue orders to 392 firms to install washing facilities for the employees.

Outside of Chicago and Cook County 269 inspections were made—26,788 employees found working, and 380 orders issued.

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# **Occupational Disease Law**

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## OCCUPATIONAL DISEASE INSPECTIONS AND MEDICAL INVESTIGATIONS.

The Occupational Disease Act of Illinois has for its purpose the protection of individuals from disease, due or incident to their occupation, and deemed extra hazardous. This legislation was enacted following the investigation of certain industries—notably the smelting of lead, zinc and brass and the paint and dry color industries—by a commission composed of physicians interested particularly in human conservation.

Briefly, it provides for a monthly physical examination of the employees of certain industries considered hazardous by the State; the submission of the reports of such examinations to the State Board of Health; and the installation of adequate measures for the protection of the laborers, such as shower baths, hot and cold water, working clothing, and provision for the taking of meals separate and apart from the work room.

### ADVANTAGES TO THE MANUFACTURER FROM A STRICT COMPLIANCE WITH THE OCCUPATIONAL DISEASE ACT.

(By Harold K. Gibson, M. D.)

For the protection of persons against occupational diseases that may be contracted by reason of such employment, the Legislature of Illinois in 1911 passed a statute relating to such diseases. Prior to the passage of this act the Legislature had provided for the health, safety and comfort of employees by the act of January 1, 1910, which relates to the safeguarding of machinery in any factory, mercantile establishment, mill or workshop, and to the proper sanitation of such premises, and which act further provides penalties for non-compliance.

These acts are based upon an exercise of police power by the State, which power in its more comprehensive sense has been defined to be the law of overruling necessity, in other words, it is that inherent power which always resides in the State and which enables it to prohibit that which may be hurtful to the comfort, safety and welfare of society.

As a general proposal it may be asserted that any reasonable law, having for its object the protection of the morals and the health of the community, would be sustained as valid and enforceable. Aside from a purely humanitarian consideration and the responsibility of the employer to society for the conservation of the individual, the material advantages accruing from a strict compliance with the spirit, as well as the letter of the Occupational Disease Act, may be broadly enumerated as follows:

*First*—The undoubted increase in the efficiency of the employee, a fact to which any of our manufacturers within the scope of the Occupational Disease Act would bear testimony.

*Second*—The reduction to a minimum of lengthy and costly litigation.

While it may be assumed that all legislation is educational in character, it seems to us that after a survey of several years' operation of the Occupational Disease Act, that it is peculiarly and to a greater extent dependent upon the education of the individual than any other similar legislation enacted in our State.

The employer of labor, of a character such as to greatly increase the morbidity among his employees, is confronted with difficulties and responsibilities of which his fellow employers in the less hazardous trades have slight conception. For example; a piece of hazardous machinery may be so effectively safeguarded that irrespective of the human element, hazard to the individual may be reduced in certain instances to a negligible quantity.

By way of contrast let us consider the case of the manufacturer of dry colors, a refiner of lead, a foundryman or the proprietor of a paint shop. We will assume that he has complied with the letter of the law, that his employees are examined periodically by a competent physician, that the ventilation of his plant is adequate, as are his lavatories and facilities for the personal hygiene of his employees, yet the morbidity among his workmen continues high, and eventually a complaint investigated by this department reveals an employee in the County Hospital with lead paralysis, and his wife and several children a charge upon the county. In the ensuing litigation it is proven that the plaintiff was permitted to eat his lunch in the casting room of the foundry, and this, despite the fact that the company had provided a room for this purpose. Undoubtedly such an exhibition of lax shop discipline as occurred in this particular case, and also others of a similar nature, are responsible for a large quota of the lead morbidity in the various industries. We, who have in part witnessed the transition of the basement foundry with its absence of light and air, its dust-laden atmosphere, to the modern foundry with its adequate exhaust system and lavatories, and last but not least, its facilities for teaching and encouraging personal hygiene among its employees, have seen the elimination of brass chills and plumbism in the latter type of foundry. It has been proven beyond question that the worker in the dusty trades is notoriously more susceptible to the pulmonary affections, than his co-workers in other industries.

A glance at the sick reports of any of our large lead refineries will show the preponderance of bronchitis and other pulmonary affections. In this day of intensive production in the metal refining industries, the time lost by reason of disability from dust-born is to a great extent preventible.

When all is said, the demands upon the manufacturer under the Occupational Disease Act, amount in the aggregate, to little more than the provision for sanitary and healthy working conditions and the facilities for personal hygiene. You, Mr. Foundryman, if your superintendent or foreman tells you that your employees will not use the shower baths, or washing facilities provided, or that they prefer to take their

lunches in a neighboring saloon, or in the furnace room of the plant, discharge your foreman and secure the services of a man of sufficient intelligence to not only enforce shop discipline in your establishment, but who will encourage personal hygiene even to the extent of permitting bathing on the company's time.

The time is surely not far away when the Compensation Act will be extended to those who are exposed to the hazards of an occupational disease. Then the manufacturer who has already instituted every possible measure for the prevention of such disease among his employees will enjoy untold advantage over his less fortunate colleagues, in that his working forces have been brought to a sense of appreciation of the necessity for observing the simple rules for personal hygiene.

If further testimony were necessary to show the advantages of strict compliance with the act, one has only to make a comparative study of the incidence of plumbism among journeymen painters, the greatest proportion of whom are not protected by the act, and those painters regularly employed in factory or work shop who have the privileges of adequate washing facilities and regular medical examinations. Some years ago a careful physical examination was made by this department of the members of a certain journeymen painters' organization. Over one hundred of the men from a membership of approximately two thousand showed conclusive evidence of plumbism or its sequæ. Now let us take the figures of one of our largest producers of white lead and dry colors with an average of 375 men examined. We find for the past year but four cases of plumbism and these among men employed in the hazardous phases of dry color making, and the manufacture of white lead. Could any more convincing argument for strict compliance with the Occupational Disease Act be adduced? Surely it is a sound precept of economics that the hazards incurred by workmen carrying on the industries of our country, should in the first instance be a charge on production in order that they may be borne by the community at large. Purely from a legal view point, recent litigation has convinced us that the courts are not inclined to look lightly upon the so called occupational poisonings (see *Sheets v. International Harvester Company*). The history of personal injury legislation is in the main, unsatisfactory to all concerned.

#### SHOWER BATHS IN FACTORIES OPERATING UNDER THE OCCUPATIONAL DISEASE LAW.

Manufacturers who receive instructions from this department under the Occupational Disease Act, owing to the poisonous processes used in the conduct of their business, such processes being fully described in the aforementioned act, are required to install one shower bath for every ten employees in that portion of their plants in which such processes are being carried on.

As a general rule little difficulty is encountered with regard to the enforcing of the provision of the law as to medical examination of employees or the providing of lockers, etc., the one exception being an objection on the part of some manufacturers to install one or more

shower baths. It was found upon re-inspection that one concern, to whom it was necessary to issue an order for the installation of a shower bath, had, to simulate a compliance with the instructions, hung a hose over a beam; in two other instances a bath-tub shower hose had been installed in the basement to meet the requirements of the departmental order. In small concerns employing only two or three men we try to be as lenient as permissible, but in some cases where the processes employed are especially poisonous and hazardous to the health of the worker, strict enforcement of our orders are demanded; for instance, where a soluble lead dust is found in the air content of the room, the lead dust will come in contact and adhere to the hair and skin, the most efficient way of preventing plumbism is by washing with soap and water, and a shower bath is the most certain method of cleansing the entire body. Occasionally, however, the department finds that no objection is offered, and in some new places inspected shower baths have already been installed.

One of the physicians recently visited a spelter plant for the purpose of re-inspection, an order had been given this concern about eight months previously for a wash house with shower baths, spigots, soap, towels, brushes and lockers. The physician found that instead of one wash house as originally ordered the firm had built four and they were just completing a fifth wash room equipped with shower baths. Although the firm in question had "kicked" on receiving the order of this department, their principal contention being that the men would not use the shower baths, they were so highly gratified with the results obtained from several viewpoints that the above described conditions had developed, which exceeded the absolute requirements of the law.

The following description of the department's requirements for a shower bath are given below.

(1) A spray placed eight to ten feet above the floor supplied with hot and cold water fitted with a combination spigot so as to allow the bather to regulate the temperature of the water.

(2) A drain.

(3) Privacy.

(4) Rack for soap and brushes.

(5) Wood mat on floor to prevent contact with cement floor.

(6) Easy access to lockers.

#### RESULTS OF INSPECTIONS.

In making re-inspection of 45 concerns recently we found that all employees used the shower baths in five instances, by most of the men in 32 instances, occasionally in 3 instances and 5 instances they were not used at all. The majority of these concerns had objected to installing a shower, their argument being that the men would never accept such an innovation.

The use of the shower depends mostly on the employer in his intent to follow the spirit of the law, and not only its demands. In the five factories where the shower baths stood idle other provisions of factory legislation are scoffed at. We will concede that it is necessary to educate a certain class of men in the use of the shower bath, not all



have had the advantage of education in matters pertaining to health and sanitation. Far-sighted concerns have social service departments to educate their employees in home sanitation, cleanliness and hygiene; in such concerns we invariably find shower baths even when they are not required by this department. They are actuated from both economic and humanitarian motives.

In gathering information relating to shower baths one fact speaks for itself; about four or five o'clock men can be seen stripped and in the shower baths, men in all classes of labor.

The writer in his experience in the Cook County medical service has seen many cases of disability amongst the workers caused by lumbago, neuritis, and so called rheumatic conditions especially during midwinter and midsummer. The worker leaves his employment covered with sweat, grime and dust, the pores of his skin are closed, his skin does not function, it is midwinter, he waits for a car in this condition; or in summer he gets into a cool place, drinks cold beverages or rides in an open car. Obviously such practices are detrimental to his welfare. We all know that if a horse is allowed to stand covered with sweat, he should be covered with a blanket, the underlying principle being the same for the human animal.

When the worker takes a bath he not only removes any sweat and grime, but by using first hot, and then cold water he prepares himself for any atmospheric conditions. Rubbing the skin with coarse towels increases the circulation of the blood thus assisting nature in removing the toxins of fatigue through the eliminative function of the skin.

In conclusion we emphasize the moral effect of a shower bath; cleanliness leads to better habits outside the shop, improves home conditions and renders the employee more capable for the day's work. The experience of this department is that employees readily adopt the use of the shower bath and that its use increases the efficiency of the worker both from the health and economic viewpoint and reduces the days of disability caused by lumbago, neuritis and rheumatic conditions.

## THE DUSTY TRADES.

(By George L. Apfelbach, M. D.)

Another year has rolled by without any material advance on the subject of dust as a cause or predisposing factor of tuberculosis. We have previously mentioned that the dusty trades furnish the greatest number of occupational disease cases. Our Occupational Disease Law covers only specific poisons. Every year sees an increase of effort on the part of our inspectors and departmental heads to introduce into factories appliances for the protection of the worker against dust. The Health, Safety and Comfort Law of the Illinois Department of Factory Inspection provides legal measures to eliminate the dust factor. The institution of blowers on metal polishing wheels was one of the first and most efficient measures for reducing the incidence of tuberculosis in this trade as is proven by the statistics in the metal polisher's union.

Not all dusts are equally harmful and injurious to the human organism. Metallic and silicon dusts injure the respiratory passages

most severely because of their cutting the mucous membranes and deeper air passages. Vegetable dust is also injurious.

Dusts are injurious because they may mechanically injure the respiratory passages, by either cutting or by their cohesion to the mucous membranes; certain dusts, such as hair vegetable fibre are especially good carriers for bacteria; other dusts, such as lead are toxic.

The following are classified as dusty trades: Metal polishing, coal miners, cigar making, stone cutters, glass manufactories, cement workers, etc., bakers, workers in jute and flax, textile establishments, porcelain workers, polishers of mother of pearl.

Dust upon entering the nose often goes no further, but is caught by the hairs and mucous membrane in these passages. When dust gets into the trachea and bronchi it is often caught by the ciliary cells of the mucous membranes and is removed by coughing or expectoration. If not removed aveoli of the lung, irritating the ephithelium causing inflammatory process, induration and thickening. Furthermore, the dust may reach the pari-bronchial glands causing them to enlarge and undergo fibrous changes. Oftentimes the dust in causing a chronic inflammatory process of the lungs produces atelectasis, emphysema. From the pari-bronchial glands the dust can reach by embolism or by the blood stream to other organs so that we often see, for instance in coal miners, not alone the anthracosis of the lungs, but also of the spleen, liver and even the marrow bone.

Hayhurst has pointed out that coal miners are not necessarily immune from tuberculosis and has shown that they are on the other hand more subject to pneumonias than their trade should allow. This brings us to the point that dust not alone predisposes to tuberculosis, but to other diseases of the respiratory passages such as for instance pneumonia, bronchitis and changes in the nose eustachian tubes.

Other dusts by reason of their mechanical irritation, or because they contain chemical irritants, cause dermatitis; we refer to cement workers' eczema, arsenical ulcers and dermatitis from trinitrotoluene, analine, chrome dust, etc.

Metallic dust is sometimes the cause of eye injury, as for instance, in metal polishing where if only a small particle of emery dust penetrates the cornea an iritis may ensue or still worse a panophthalmitis.

We do not intend to cite cases of the harm done by dust in the various trades. The writer would, however, refer to the success of Dr. Harry Mock, who found in one of the industries of which he had charge the occurrence of tuberculosis abnormally high in packers. By building a new plant and substituting excelsior for the dusty refuse paper used, he was able to markedly reduce pulmonary tuberculosis in this trade.

Upon complaint to this department a certain factory was inspected down State, where through statistics obtained from the Board of Health it was shown that eight young men had succumbed to tuberculosis within the past year; the place being exceptionally dusty. The dust was chiefly composed of silicon and was used for the purpose of making kitchen cleansers. We found eight boys working on a carrier on which cartons were being packed; they were wearing respirators, but even then were

subject to an atmosphere of fine particles of silicon. Means and measures were devised for eliminating the dust hazard.

# CONCERNING AUTOPSY FINDINGS IN CARBON MONOXIDE, NITRIC OXIDE AND BENZOL POISONING, WITH SPECIAL REFERENCE TO THE DETERMINATION OF BENZOL IN TISSUE.

(By George L. Apfelbach, A. B., M. D.)

The information here presented should not be exclusively a part of the knowledge of the coroner's physician and medico-legal toxicologist, but properly belongs to the bibliography of the industrial hygienist.

I have reached the conclusion, based on several postmortem examinations in which I participated, where death was probably due to poisonous fumes and gases, and by taking into consideration a recent work on benzol poisoning by Von Heffter, that it is often difficult to diagnose poisoning by fumes and gases during life. Further it is even more difficult to prove the cause of death from certain poisonous fumes and gases in autopsy. I have chosen three postmortem records to demonstrate this point, and will in addition describe a method of determining the presence of benzol in viscera.

The limits of this paper do not permit me to discuss all the toxic fumes and gases. Many of them are simply respiratory irritants, for instance: ammonia, acetaldehyde, amyl alcohol, formaldehyde and usually chlorine. Among the real toxic gases we must refer to analine, arseniuretted hydrogen, benzol, carbon disulphide, carbon monoxide, cyanogen compounds, nitroglycerine, nitrous and nitric fumes, methyl alcohol and turpentine. In the industrial field there seems to be an increase in the use of carbon monoxide, nitric acid and benzol. For this reason there are here described the findings of three autopsies on bodies in which death was thought to have resulted from fumes or gases of these three substances.

## AUTOPSY REPORT NO. 1.

I was called to a city in Indiana to assist the coroner's physician in an autopsy on a man who had been found dead in a plant of one of the steel companies. Death had apparently ensued four or five hours previously, the body was found in the open air lying upon a platform near an open hearth furnace. On inspecting the scene of death it seemed remarkable to me that anyone could succumb at this point from any gas.

The body was that of a man about 30 years old, 6 feet 2 inches in length, well nourished, scar of burn over upper third sternum, hair fairly abundant, good teeth, and showed considerable post mortem lividity. Nothing suggesting the cause of death was noted from the general inspection.

Lungs negative; heart, normal size with no pathology; old pleural adhesions on right side, midaxillary line at base of lungs; stomach negative; small areas of hypermia in mucosa of the small intestine;

kidneys negative; spleen quite hyperemic; pancreas negative; brain negative; bladder negative, 3 to 4 ounces of amber urine; blood rather bright red but not suggesting typical carbon monoxide blood, a test tube of which was obtained for analysis.

#### AUTOPSY REPORT NO. 2.

I was called about six weeks later to the same city where the same coroner's physician and the writer performed another postmortem; this time on a man who died in about thirty minutes while working in a powder plant. He had worked only four hours for this concern, having quit his job the night before as an open hearth furnace man in a steel company where he had worked for two years. In the new job he was engaged in a room where cotton is treated with nitric acid. While at work he said: "This stuff is too strong for me!" leaving the room for the open air where apparently an attack similar to ordinary syncope ensued. Death followed in about 30 minutes.

The cadavar was that of a man about 40 years old, muscular and well nourished, showing no external markings except postmortem lividity. On section of the body we found: enlarged edematous, aveoli containing frothy fluid; bronchi and trachea hyperemic; larynx up to within one inch of the rima; glottis markedly reddened; heart absolutely negative; pleura negative; intestines showed no ecchymosis or hyperemis; the descending colon was bound to the parietal peritoneum by old adhesions; kidneys negative; spleen hyperemic; brain negative; blood was fluid, did not clot, and was very dark red in color. A test tube was obtained for further analysis.

#### AUTOPSY REPORT NO. 3.

The cause of death in this case is still a matter of dispute. I quote this record from a foreign record. "A young man went into a basement to remove an obstruction in a benzol pipe; in so doing he remained at this point for about 30 minutes, he spilled benzol over his face, hands and clothes, he became faint, reached the main floor where two men assisted him to the outside air. He collapsed; artificial respiration was employed. The man died and a postmortem was performed the following day."

These lungs were edematous; the heart negative; no odor of benzol in any of the viscera; kidneys negative; brain negative; the urine in the bladder was clear and of a yellowish color, with a negative analysis for benzol. The insurance authorities claimed the man died from heart disease; the examining physician thought the man died from benzol, although there existed no proof.

After reading these three autopsy reports, is it possible to determine the cause of death? Had I allowed the findings of cases 1 and 2 to rest at this point, we would have been unable to have determined the cause of death. In case 1, blood analysis showed carbon monoxide haemaglobin in the spectroscope. In the blood obtained from case 2 the examining chemist found a small quantity of nitric oxide, but no metahemaglobin. In case 2, I am positive that the man died of nitric fumes, but am in doubt whether death was due to paralysis of the

central nervous system by nitric oxide, or whether because of shock produced by the irritating action of this gas on the respiratory mucous membranes. Case 3 is still in doubt, because benzol could not be demonstrated in the subject. The point emphasized by these three cases is that industrial deaths from fumes and gases bring the industrial hygienist into the intricate meshes of toxicology, and that to analyse such fatalities it is usually necessary to depend upon blood analysis and chemical examination of the viscera.

The characteristic autopsy findings of carbon monoxide, nitric oxide and benzol are as follows: Carbon monoxide and nitric oxide are taken up in less detailed manner than benzol, as it is desired to present a method for determining benzol in tissues, according to the method suggested by Joachimoglu.

The post-mortem findings of carbon monoxide:

The body often does not appear dead, but seems simply to be asleep. The face is often of a light pinkish rouge-like color. Frequently considerable areas or large blotches of red are to be found on the corpse, over the chest, arms and thighs. This finding must not be confused with post-mortem lividity. Often the lips have been described as cherry red.

On sectioning it will be observed that the blood usually has an abnormally bright red color. The above findings are constant. Unfortunately, however, as in the case I have described, they may be lacking.

Another common finding from CO autopsies is the occurrence of hemorrhages in various tissues, sometimes quite extensive, as in the pleural cavities, the brain, muscles and intestines.

The odor of gas is sometimes present, but not where the body has lain for some time. As CO itself is odorless, the body has no odor, except when CO is combined with certain other gases.

The microscopic pathology, such as encephalitis, minute hemorrhages into the brain, are of passing interest only, not being of diagnostic value.

The only sure proof of death from CO should be the spectroscopic test. Other tests of some value are the Haldane colorimetric and tannic acid tests.

In the use of nitric acid, nitric oxide fumes often arise. We seldom see deaths from this commonly used acid because nitric oxide is very unstable and breaks up into  $N_2O_3$  and  $NO_2$ , which are also toxic; but because these are so irrespirable their presence is immediately noticed, thus they seldom are a cause of death. There must exist certain conditions when death occurs from nitric acid fumes which have not as yet been ascertained or recorded.

Nitric acid causes death by; central nervous paralysis; vasomotor paralysis; depriving the organism of oxygen by the formation of metahaemoglobin, and possibly, shock.

Following are the common findings: The blood is usually a dark red color and does not clot easily. Metahaemoglobin is not constant, since this finding depends on the length of time that the autopsy is performed after death and, I believe, on the manner in which this gas

acted on the organism. The lungs are usually edematous, and the respiratory passages deeply hyperemic. Hemorrhages in the tissue are also found in some autopsies. The positive proof of death is the determination of nitric compounds by spectroscope, or by chemical analysis. In performing a determination for  $\text{NO}_2$ ,  $\text{N}_2\text{O}_3$  or  $\text{NO}$  in the blood I know no test better than that used by W. D. McNally, chemist to the coroner's office, Cook County, Illinois, and which is not described in the literature.

Steam over volatile portion of a minced organ. If the distillate contains nitric compounds it is carried over into a .25 per cent KI solution. The NO will liberate iodine which can be titrated against thiosulphate. If one desires only a qualitative test add starch solution to the KI. If iodine has been liberated by the NO gas it will turn blue.

#### POST-MORTEM FINDINGS FROM BENZOL POISONINGS.

If the odor of benzol cannot be detected on opening the thoracic and abdominal viscera, it can often be obtained on cutting the meninges of the brain.

The other findings are often like those of nitric oxide showing lung edema, hemorrhages in tissue, a fluid blood with a slow imperfect coagulation.

In many cases the odor of benzol cannot be noticed as in the case of Von Hoeffter which I have cited above. Following the claim that this case did not present complete evidence of benzol, Dr. Joachinglu entertained the view that methods of determining benzol in the viscera were perhaps efficient only when a large quantity of benzol had been taken up. By animal experimentation, using cats and dogs, he showed the method a delicate one, much more so than previous methods.

The following is a description of the method:

There is no known characteristic reaction showing benzol directly in the tissues; it must be converted into some other substance in which a characteristic reaction can be produced. The most practicable method is to convert benzol into dinitrobenzol. This is, however, difficult in the presence of water. In the older methods used by Lehmann, air was driven through the material for 20 to 24 hours, collecting the benzol in nitric acid and converting it into dinitrobenzol. This method shows only large quantities of benzol.

Joachinglu chops up the organs and places them in 100 to 150 cc. of water in a round flask, and adds 12 cc. of dilute  $\text{H}_2\text{SO}_4$ . To this flask is attached a distilling apparatus about 45 cm. long, as described by Glinsky. This leads to a Liebig condenser about 60 cm. long. The condenser empties into a 250 cc. Erlenmeyer flask. Benzol distils over with very little water at  $80.4^\circ\text{C}$ . In the end distillation flask is placed 80 cc. carbon tetrachloride,  $\text{CCl}_4$ . To prevent loss the end distillation flask is cooled rapidly. After the original material with water begins to boil it should be so continued for 20 minutes.

The distillate is removed to a filter which separates the water from the carbontetrachloride materials.

Place in an Erlenmeyer flask and add 10 cc. of a nitrating mixture,

that is, two volumes of fuming nitric acid, and one volume of concentrated sulphuric acid. Shake the mixture for 10 to 15 minutes.

Place in a porcelain dish, on a water bath, and heat very carefully, stirring continually with a glass rod, until all the carbon tetrachloride is given off. The residue contains benzol as dinitrobenzol.

Add about 100 cc. distilled water and make faintly alkaline with sodium hydroxide. If only a qualitative test is desired it is not necessary to make the solution.

Place in a separating funnel and shake three times, using each time 80 cc. of ether. Separate ether in the filter and allow to stand for 3 to 4 hours. The ether is distilled off up to 30 to 40 cc. and this is then heated carefully, in a weighed dish, if quantitative analysis determined should be made. If the organs contain benzol a yellowish crystalline residue will form.

To determine that this residue is dinitrobenzol, a characteristic reaction has been described.

Three to five MGN. of the residue is dissolved in 1,500 absolute alcohol. Add 2 to 3 drops of a 33 per cent sodium hydroxide solution, to this add when dissolved a double solution of 1 per cent levulose solution. In 1 to 2 minutes there is formed a very violet color, which after 5 to 10 minutes turns a dirty brown. By this reaction one can detect .5 MGN. of dinitrobenzol. This reaction does not occur with other nitric compounds.

This method described by Joachinglu will not be interfered with except there be present phenol, which is converted into picric acid by this method, nor in the presence of prussic acid.

In his experiments with cats and dogs, he recovered 55 to 60 per cent of the benzol ingested, losing as he thought the balance because the carbontetrachloride doesn't take up all the benzol, and also in the distillation process.

His conclusions were based on animal experimentation and show that benzol can be recovered from the tissues, and that benzol has an affinity for the brain and cord.

#### Conclusions:

(1) Autopsies on persons supposed to have succumbed from poisonous fumes or gases should be performed with great care. No conclusions should be made until a routine medicochemical analysis of the blood and tissues has been made.

(2) The gross post-mortem findings of certain deaths from fumes and gases are so often similar that no conclusion as to the cause of death can be made from them alone.

(3) Benzol poisonings can be determined better by Joachinglu's method than by any other so far described.

TABLE NO. 1—OCCUPATIONAL DISEASE REPORTS, ACCORDING TO SECTION 4 OF THE OCCUPATIONAL DISEASE LAW SHOWING TOTALS FOR THE INDUSTRIES, FOR THE FISCAL YEAR JULY 1, 1916, TO JUNE 30, 1917.

Diseases and industry.		Number of employees reported on for—																							
		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Jan.		Feb.		Mar.		Apr.		May		June	
		Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.	Sick.	Well.
"A" Lead poisoning		4	1	554	6	3,031	3	3,143	6	588	5	506	5	530	1	736	1	810	1	837	9	250	13	946	
Smelting and refining.....		35	6	3,193	6	3,031	3	3,143	6	588	5	506	5	530	1	736	1	810	1	837	9	250	13	946	
Manufacturers of paint.....		26	6	336	6	336	6	336	6	336	6	336	6	336	6	336	6	336	6	336	6	336	6	336	
Manufacturers of storage batteries.....		10	6	166	6	175	6	175	6	175	6	175	6	175	6	175	6	175	6	175	6	175	6	175	
Manufacturers of tinware.....		6	1	274	1	287	1	287	1	287	1	287	1	287	1	287	1	287	1	287	1	287	1	287	
Manufacturers of car seals and bearings.....		4	1	219	1	219	1	219	1	219	1	219	1	219	1	219	1	219	1	219	1	219	1	219	
Telephones and switch boards.....		4	1	173	1	183	1	183	1	183	1	183	1	183	1	183	1	183	1	183	1	183	1	183	
Painting.....		53	11	1,557	1	1,008	2	1,582	1	1,022	1	1,353	1	1,582	1	1,353	1	1,582	1	1,353	1	1,582	1	1,353	
Electrotypers.....		4	1	156	1	138	1	142	1	149	1	101	1	100	1	156	1	151	1	150	1	57	2	409	
Wallpaper and oilcloth.....		3	1	31	1	27	1	28	1	29	1	28	1	27	1	27	1	24	1	24	1	20	1	16	
Enameling.....		1	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	1	16	
Total class "A".....		150	19	6,069	8	6,391	6	6,585	11	6,705	16	6,398	7	6,535	11	6,678	12	7,089	15	7,381	16	7,541	11	5,775	17
"B" Other poisonings—																									
Arsenic, paris green, etc.....		2	1	301	1	12	1	12	1	15	1	18	1	17	1	17	1	1	1	17	1	17	1	1	
Brass founders (a).....		65	3	2,378	3	2,540	3	2,107	2	2,412	2	2,580	2	2,065	2	2,722	3	2,672	2	2,634	1	1,920	1	1,273	
Spinners, polishers (b).....		22	1	617	1	604	1	674	1	677	1	603	1	633	1	638	1	579	1	585	1	585	1	496	
Plating and electroplating.....		11	1	106	1	185	1	189	1	190	1	201	1	184	1	190	1	188	1	201	1	107	1	68	
Delaconania.....		1	1	1	1	5	1	8	1	6	1	6	1	6	1	6	1	9	1	7	1	7	1	8	
Galvanizing.....		3	1	39	1	37	1	36	1	38	1	38	1	38	1	36	1	38	1	43	1	42	1	36	
Total class "B".....		104	5	3,477	4	3,443	4	3,086	2	3,341	2	3,657	2	3,573	2	3,596	4	3,967	2	3,487	1	2,573	1	1,808	
Grand total.....		254	24	10,146	12	9,834	10	9,671	13	10,106	18	9,835	9	10,192	13	10,251	19	11,366	18	11,028	12	8,348	18	5,817	



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## Blower Law

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## RESULTS OF INSPECTIONS ACCORDING TO THE PROVISIONS OF THE "BLOWER LAW."

The appended tables present a concise analysis according to inspections made under the Blower Law divided into industrial classifications, also showing the number of employees, number of hours employed, number of wheels and the class of orders issued in the entire State.

In Chicago and Cook County 458 establishments were inspected, involving 11,181 inspections, 3,432 wheels were inspected and of this number 38 were found unprotected. In 18 instances orders were issued for the repairing and cleaning of pipes. In five establishments orders were issued to provide hoods.

One hundred and thirty-two inspections were made in 78 establishments in cities and towns outside of Chicago and Cook County, and 651 wheels were found, of which number 17 were unprotected. In 18 instances orders were issued for repairing and cleaning pipes. Other orders appear under their various classifications.

A total of 12,830 inspections were made in the entire State covering 331 establishments. The number of orders issued amounted to 365. For increasing velocity 116 orders were issued, 31 for the improvement of equipment, 24 for the installation of new exhaust systems, 18 orders to provide adequate hoods, 4 for changes in angle branch pipes. The hours of employment in these shops are also given, and in 116 cases grinding was combined with polishing and boring.

In the entire State only six establishments were located in basements, in correcting these violations 61 inspections were made.

TABLE NO. 1 RECEIPTS OF INDEPENDENT ACCOUNTING FIRM FOR ESTATE, TRUST, OR CHARITABLE PURPOSE  
JUNE 30, 2007

Location of related parties	Industries										Number of employees	Number of hours		Number of vehicles	Orders issued	
	Non-ferrous metals	Non-ferrous alloys	Coatings	Tool steels	Aluminum alloys	Stainless steels	High speed steels	Cast irons	Cast steels	Forgings		24	36	24	24	24
Passage and Cook Company	363	1,196	303	16	16	16	111	1	111	1	2,393	69	70	3,063	303	104
Units outside of Passage and Cook Company	28	179	61	6	6	1	31	1	31	1	632	3	3	634	169	12
Total	391	1,375	364	22	22	22	142	2	142	2	3,025	72	73	3,697	512	116

TABLE NO. 9. RESULTS OF INSURPTIONS ACCORDING TO THE DEGREE OF LAW IN CITIES OF THE REPUBLIC OF CONGO, JULY 1, 1966.  
1966 JUNE 30 1967

Number of employees	Number of hours	Number of wheels	Orders issued	Industries:													
				Foot shapers	Shoes	Tools and machine	Wheels	Boats	Primaries	Country and farm	Novelty	Marine and	Trucks	Miscellaneous	Total	Men	Women
1	10	10	1														
2	20	20	2														
3	30	30	3														
4	40	40	4														
5	50	50	5														
6	60	60	6														
7	70	70	7														
8	80	80	8														
9	90	90	9														
10	100	100	10														
11	110	110	11														
12	120	120	12														
13	130	130	13														
14	140	140	14														
15	150	150	15														
16	160	160	16														
17	170	170	17														
18	180	180	18														
19	190	190	19														
20	200	200	20														
21	210	210	21														
22	220	220	22														
23	230	230	23														
24	240	240	24														
25	250	250	25														
26	260	260	26														
27	270	270	27														
28	280	280	28														
29	290	290	29														
30	300	300	30														
31	310	310	31														
32	320	320	32														
33	330	330	33														
34	340	340	34														
35	350	350	35														
36	360	360	36														
37	370	370	37														
38	380	380	38														
39	390	390	39														
40	400	400	40														
41	410	410	41														
42	420	420	42														
43	430	430	43														
44	440	440	44														
45	450	450	45														
46	460	460	46														
47	470	470	47														
48	480	480	48														
49	490	490	49														
50	500	500	50														
51	510	510	51														
52	520	520	52														
53	530	530	53														
54	540	540	54														
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56	560	560	56														
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58	580	580	58														
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61	610	610	61														
62	620	620	62														
63	630	630	63														
64	640	640	64														
65	650	650	65														
66	660	660	66														
67	670	670	67														
68	680	680	68														
69	690	690	69														
70	700	700	70														
71	710	710	71														
72	720	720	72														
73	730	730	73														
74	740	740	74														
75	750	750	75														
76	760	760	76														
77	770	770	77														
78	780	780	78														
79	790	790	79														
80	800	800	80														
81	810	810	81														
82	820	820	82														
83	830	830	83														
84	840	840	84														
85	850	850	85														
86	860	860	86														
87	870	870	87														
88	880	880	88														
89	890	890	89														
90	900	900	90														
91	910	910	91														
92	920	920	92														
93	930	930	93														
94	940	940	94														
95	950	950	95														
96	960	960	96														
97	970	970	97														
98	980	980	98														
99	990	990	99														
100	1000	1000	100														
101	1010	1010	101														
102	1020	1020	102														
103	1030	1030	103														
104	1040	1040	104														
105	1050	1050	105														
106	1060	1060	106														
107	1070	1070	107														
108	1080	1080	108														
109	1090	1090	109														
110	1100	1100	110														
111	1110	1110	111														
112	1120	1120	112														
113	1130	1130	113														
114	1140	1140	114														
115	1150	1150	115														
116	1160	1160	116														
117	1170	1170	117														
118	1180	1180	118														
119	1190	1190	119														
120	1200	1200	120														
121	1210	1210	121														
122	1220	1220	122														
123	1230	1230	123														
124	1240	1240	124														
125	1250	1250	125														
126	1260	1260	126														
127	1270	1270	127														
128	1280	1280	128														
129	1290	1290	129														
130	1300	1300	130														
131	1310	1310	131														
132	1320	1320	132														
133	1330	1330	133														
134	1340	1340	134														
135	1350	1350	135														



TABLE NO. 4—ANALYSIS OF REPORT OF INSPECTIONS ACCORDING TO THE BLOWER LAW IN CITIES OUTSIDE OF COOK COUNTY, JULY 1, 1916, TO JUNE 30, 1917.

Cities.	At time of inspection doing—			Condition of blower at time of inspection.		Location of blower at time of inspection.		U. S. tube test at time of inspection.		Disposal of dust at time of inspection by the following system.		Kind of hoods.		Location of department at time of inspection.			How driven.		Condition of pipes at time of inspection.				
	Polishing.	Buffing.	Grinding.	Good.	Bad.	Above wheel.	Below wheel.	Below 5 inches.	Above 5 inches.	Collector.	Free.	Flue.	Oval hoods.	Funnel hoods.	Basement.	First floor.	Second floor.	Third floor and above.	Direct.	Indirect.	Good.	Bad.	
Aurora.....	37	35	3	10	1	1	11	8	8	10	1	2	11	1	1	1	6	9	2	2	11	11	6
Belleville.....	5	5	13	50	...	8	3	11	39	10	32	2	49	1	...	...	42	1	...	...	50	44	6
East St. Louis.....	1	1	3	8	...	5	3	6	2	7	1	...	8	...	...	...	1	...	...	1	...	...	...
Elgin.....	3	3	...	...	1	...	...	1	...	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Freeport.....	3	3	2	2	...	1	4	2	4	1	4	...	2	...	4	...	2	...	...	...	...	...	...
Geneva.....	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Moline.....	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
New Athens.....	3	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
O'Fallon.....	13	13	9	25	1	13	9	15	1	13	...	1	21	...	...	1	19	...	...	...	22	21	1
Quincy.....	4	4	6	5	3	1	...	...	...	...	...	...	5	...	...	...	4	4	...	...	...	...	...
Rockford.....	7	7	3	8	2	2	...	...	6	6	4	...	10	...	...	9	1	...	...	10	9	1	
Stock Island.....	4	4	...	...	...	...	...	...	...	...	...	...	4	...	...	3	...	...	...	...	...	...	...
St. Charles.....	3	3	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...
Waukegan.....	3	3	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...
Woodstock.....	3	3	...	...	...	...	...	...	...	...	...	...	3	...	...	...	...	...	...	...	...	...	...
Total.....	90	90	42	123	9	30	102	59	73	62	67	3	127	5	3	104	22	3	8	121	120	12	12

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## Structural Iron Law

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## RESULTS OF INSPECTIONS ACCORDING TO THE PROVISIONS OF THE "STRUCTURAL SAFETY LAW."

Our deputy inspectors have authority to inspect any building under construction in the State of Illinois, and in many cases they issue verbal orders to be carried out immediately, for the protection of the workers. In Chicago and Cook County, 269 jobs were visited 468 times and 143 official orders were issued; 25,903 men being employed on these jobs. However, of this number many of the same men were employed on two or three jobs and included in the total of employees, so these figures must not be regarded as a census. Forty-eight accidents were reported to the department, 10 of these proving to be fatal. Outside of Chicago and Cook County 112 inspections were made in 72 establishments. Forty-two orders were mailed from the department and 8 accidents were reported, of which number one was fatal.

TABLE NO. 1.—SUMMARY OF INSPECTIONS ACCORDING TO THE STRUCTURAL LAW FOR THE ENTIRE STATE JULY 1, 1916 TO JUNE 30, 1917.

Location.	Number of jobs.								Number of inspections.	Number of employees.	Number of orders issued.	Number of accidents.		
	Total.	Erecting.	Repairing.	Altering.	Wrecking.	Clearing.	Painting.	Excavating.				Total.	Fatal.	Nonfatal.
Chicago and Cook County.....	269	152	2	5	9	19	71	11	468	25,903	173	48	10	38
Outside of Cook County.....	72	62	...	2	...	...	8	...	112	6,659	42	8	1	7
Total for entire State.	341	214	2	7	9	19	79	11	580	32,562	215	56	11	45

TABLE NO. 2.—INSPECTIONS ACCORDING TO THE STRUCTURAL LAW IN CITIES OUTSIDE OF COOK COUNTY, JULY 1, 1916, TO JUNE 30, 1917.

Name of city.	Number of jobs.		Number of inspections.	Number of employees.	Accidents.		Nature of work.	Class of building.	Order issued.
	Fatal.	Nonfatal.			Fatal.	Nonfatal.			
Alton .....	2	2	16	....	....	....	Erecting ..	Flour mill.....	Rail platform. Safety tackle.
Aurora .....	....	....	15	....	....	....	..do.....	Printing plant.....	
	6	6	24	....	....	....	..do.....	Hotel.....	
	....	....	2	....	....	....	Painting...	Office building...	
	....	....	10	....	....	....	Erecting ..	Garage.....	

TABLE NO. 2—Concluded.

Name of city.	Number of jobs.	Number of inspections.	Number of employees.	Accidents.		Nature of work.	Class of building.	Order issued.
				Fatal.	Nonfatal.			
Aurora .....			18			Erecting	School .....	Guard hoists.
			22			do	Factory .....	
			14			do	Store .....	
Bartonville....	1	4	1,051			do	Factory .....	Guard hoists.
Burlington.....	1	2	100			do	Bridge .....	Safety scaffold.
Champaign.....	4	7	63			do	Office building.....	
			12			do	Smoke stack.....	Ladders ordered.
			20			do	Cold storage.....	
			20			do	Hotel.....	
Carbondale....	1	1	32			do	School .....	
Danville.....	6	11	47			do	Masonic Temple....	Safety tackle.
			30			do	Bank building .....	
			52			do	Hospital .....	
			26			do	Power house.....	
			90			do	Railroad depot.....	
			2			Painting..	Store .....	Safety scaffold.
East St. Louis.	3	9	35			Erecting	Office building.....	Safe temporary floor.
			949	2		do	Bridge .....	Safety nets and floor.
			35			do	Office building.....	Safe temporary floor.
Freeport.....	2	3	103			do	Bank .....	
			30			Altering..	do .....	
Galesburg.....	3	6	210			Erecting	Power house.....	Guard hoists.
			17	1		do	Stack.....	Ladders and barricades.
			5			do	Smoke stack.....	
Hinsdale.....	1	1	42			do	School .....	Rail and barricades.
Joliet.....	9	13	68	2		do	do .....	Proper floor supports, guard hoists.
			40			do	do .....	
			28			Altering..	do .....	
			40			Erecting	do .....	Guard hoists.
			19			do	Factory.....	
			25			do	do .....	Ladders ordered.
			250			do	do .....	
			60			do	State farm.....	
			140			do	Power house.....	Temporary platforms.
Kewanee .....	1	1	32			do	Cold storage.....	Guard hoists.
LaSalle.....	3	3	163			do	Factory .....	
			3			do	Stack.....	
						do	Cement plant.....	(No one on job.)
Lincoln.....	4	4	15			Painting	do .....	
			15			do	do .....	
			16			Erecting	Dormitory .....	
			15			do	do .....	
Macomb.....	1	1	28	1		do	School .....	
Marseilles.....	1	1	55			do	Mill .....	Guard hoist and runway.
Moline.....	8	11	1,040			do	Factory.....	Guard circular saw.
			192			do	Office building.....	Guard circular saw, canopy over scaffold and rail.
			58			do	Jail.....	
			150			do	Viaduct.....	Guard hoist.
			22			do	Office building.....	
			2			Painting	do .....	Safety tackle.
			120			Erecting	Store .....	
			4			Painting	do .....	Safety tackle.
Quincy.....	1	1	22			Erecting	Club .....	
Rockford.....	5	10	167			do	Courthouse.....	Safe temporary floor.
			76			do	Factory.....	Safety scaffold.
			78	2		do	Bridge .....	Guard circular saw.
			30			do	do .....	
			28	1		do	Apartment building	Guard hoist.
Rock Island....	3	3	60			do	Car barn.....	Guard circular saw.
			2			Painting	Store.....	Safety tackle.
			3			do	do .....	Safety tackle.
Springfield....	4	8	336			Erecting	School.....	Guard hoist.
			35			do	do .....	
			16			do	Office building.....	
			34			do	Laundry .....	
So. Wood River	1	2	150			do	Factory.....	Guard hoist.
Urbana.....	1	2	32			do	Dormitory .....	
	72	112	6,659	1	8			

TABLE NO. 3—INSPECTIONS ACCORDING TO STRUCTURAL LAW—COOK COUNTY JULY 1, 1916, TO JUNE 30, 1917.

Nature of work.	Class of building.															
	Dwellings, stores and apartments.				Office buildings and hotels.				Schools, churches, etc.				Stacks, tanks and elevators.			
	Number of jobs.	Number of inspections.	Number of employees.	Accidents.		Number of jobs.	Number of inspections.	Number of employees.	Accidents.		Number of jobs.	Number of inspections.	Number of employees.	Number of jobs.	Number of inspections.	Number of employees.
				Fatal.	Nonfatal.				Fatal.	Nonfatal.						
Erecting.....	90	194	10,384	5	21	24	86	8,729	.....	6	28	41	1,183	1	20	959
Repairing.....	1	1	2	.....	.....	1	1	12	.....	.....	.....	.....	.....	.....	.....	.....
Altering.....	2	6	68	.....	.....	1	1	58	.....	.....	.....	.....	.....	.....	.....	.....
Wrecking.....	6	6	117	.....	.....	3	3	31	.....	.....	.....	.....	.....	.....	.....	.....
Clearing.....	9	9	33	.....	.....	6	6	31	.....	.....	.....	.....	.....	.....	.....	.....
Painting.....	47	47	77	.....	.....	10	10	31	.....	.....	.....	.....	.....	.....	.....	.....
Excavating.....	3	8	1,575	3	.....	.....	13	2,516	.....	.....	.....	.....	.....	.....	.....	.....
	158	367	12,276	7	22	53	120	11,371	.....	6	48	61	1,327	2	40	959
																6

TABLE NO. 4 CLASSIFICATION OF ORDERS OF INSPECTIONS ACCORDING TO THE STRUCTURAL LAW - CHICAGO AND COOK COUNTY  
JULY 1, 1916, TO JUNE 30, 1917.

Kind of orders.	Dwellings, stores and apartments on which orders were issued.						Office buildings and hotels on which orders were issued.						Schools and churches, etc on which orders were issued.						Stocks, tanks and elevators on which orders were issued.									
	Erecting.	Repairing.	Altering.	Wrecking.	Cleaning.	Painting.	Excavating.	Erecting.	Repairing.	Altering.	Wrecking.	Cleaning.	Painting.	Excavating.	Erecting.	Repairing.	Altering.	Wrecking.	Cleaning.	Painting.	Excavating.	Erecting.	Repairing.	Altering.	Wrecking.	Cleaning.	Painting.	Excavating.
Safe scaffolds.....	6	.....	.....	.....	5	35	.....	.....	.....	.....	.....	1	8	1	2	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....
Proper floor supports.....	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Safe tackle, etc.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Safe temporary floor.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rails.....	33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Safe hoisting machinery.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Barricades.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Signal system.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Reinforced concrete forms.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	58	.....	.....	.....	5	42	2	20	.....	.....	.....	1	8	2	13	.....	.....	.....	1	11	.....	10	.....	.....	.....	.....	.....	.....

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## Prosecutions

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## RESULTS OF PROSECUTIONS—LEGAL DEPARTMENT.

During the fiscal year just ended 594 suits resulted in convictions. The fines and costs in these cases amounted to \$8,183.50.

The following table is a recapitulation of the results of prosecutions and shows that 324 convictions with fines and costs amounting to \$4,520 were secured in the city of Chicago, while in other cities and towns 270 convictions resulted, the fines and costs of which totaled \$3,663.50.

In Chicago a total of 207 violations of the "Child Labor Law" resulted in convictions, brought on the following charges: For working children over eight hours per day, 76 cases; for employing children before seven o'clock in the morning or after seven o'clock in the evening, 3 cases; for employing children without age and school certificates, 104 cases; for employing children under 14 years of age, 9 cases; for employing children in violation of section 11, at occupations forbidden children under 16 years of age, 12 cases; for obstructing inspectors, 3 cases. Failure to comply with the Women's Ten Hour Law resulted in 25 convictions on the charge of working female help in excess of ten hours per day, and 66 convictions for neglecting to keep a time record, as required by section 5 of this law. Our court records further show that in Chicago 15 convictions were obtained for failure to comply with the Health, Safety and Comfort Law; 5 convictions under the Wash House Law; 5 convictions under the Structural Law, and one conviction under the Blower Law.

In other cities and towns a total of 270 convictions are reported, with fines and costs amounting to \$3,663.50.

Child labor violations resulted in a total of 180 convictions based on the following charges: For employing children over eight hours per day, 46 convictions; for working children before seven o'clock in the morning and after seven o'clock in the evening, 28 convictions; for employing children without an age and school certificate being on file, 83 convictions; for employing children under 14 years, 20 convictions; for employing children in violation of section 11, at occupations forbidden children under 16 years of age, 3 convictions.

The number of convictions under the Women's Ten Hour Law totaled 68, of which 19 were obtained on charges of employing women over 10 hours per day, and 49 for failure to keep a time record; 14 convictions were received for violations of the Health, Safety and Comfort Law, 7 for violations of the Wash House Law, and 1 for violation of the Blower Law.

TABLE NO. 1.

Laws.	Number of convictions.		Fines and costs.	
	In Chicago.	Outside Chicago.	In Chicago	Outside Chicago.
Child Labor Law—				
Over 8 hours.....	76	46	\$ 818 00	\$628 05
Before 7 a. m.—after 7 p. m.....	3	28	60 00	362 55
Without age and school certificate.....	104	83	1,291 75	975 35
Under 14 years.....	9	20	115 00	208 40
Violation section 11.....	12	3	170 00	37 20
Obstruction.....	3		28 75	
Total.....	207	180	\$2,483 50	\$3,211 55
Ten Hour Law—				
Over 10 hours.....	25	19	\$765 25	\$562 30
No time record.....	66	49	742 25	461 55
Total.....	91	68	\$1,507 50	\$1,023 85
Health, Safety and Comfort Law.....	15	14	\$275 00	\$223 30
Wash House Law.....	5	7	79 50	171 80
Structural Law.....	5		115 75	
Blower Law.....	1	1	58 75	33 00
Grand total.....	324	270	\$4,520 00	\$3,663 50

Total number of convictions State of Illinois..... 594

Total fines and costs State of Illinois..... \$8,183 50

The following tables present an analysis of the work of the legal department in prosecuting violators of the law. The tables being divided showing the number of cases, month by month, brought before the Municipal Court of the city of Chicago; another gives a list of 46 cities and towns in which our deputy inspectors prosecuted violators of the Child Labor Law and of the Women's Ten Hour Law. The final table gives a recapitulation for the entire State.



TABLE NO. 2—RESULTS OF PROSECUTIONS IN THE CITY OF CHICAGO JULY 1, 1916, TO JUNE 30, 1917.

Violation.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April.	May.	June.	Total.	Fines.	Costs.	Total fines and costs.
Child Labor Law—																
Under 14 years of age.....		4	1	4									9	\$ 79 00	\$ 45 00	\$ 115 00
Without age and school.....																
certificate.....	9	25	13	1	5	10	31	2	2	2	3		104	636 00	655 75	1,291 75
Over 8 hours per day.....	2	13	13	4	7	10	18	1	2	4	1	1	75	485 00	333 00	818 00
Violation section 11.....		9		3									12	110 00	60 00	170 00
Before 7 a. m.—after 7		2							1							
p. m.....													3	40 00	20 00	60 00
Obstruction.....	1	1											3	30 00	8 75	28 75
Women's Ten Hour Law—																
Over 10 hours per day.....													25	655 00	110 25	765 25
Mo. time record.....	5	8	5	3	4	3	2		4	3	1	1	66	385 00	357 25	742 25
Structural Law.....	2			2	5	8	8	2	7	6	4	2	5	75 00	40 75	115 75
Blower Law.....													1	50 00	8 75	58 75
Health, Safety and Comfort	1															
Act.....	3	1	1	2		1	2		1	1	1	2	15	175 00	100 00	275 00
Wash House Law.....	2							2				1	5	32 00	47 50	79 50
Total cases.....	25	46	34	25	21	32	61	7	17	17	11	8	324	\$2,733 00	\$1,787 00	\$4,520 00
Fines.....	\$231 00	\$616 00	\$195 00	\$247 00	\$195 00	\$241 00	\$438 00	\$60 00	\$217 00	\$151 00	\$70 00	\$72 00	\$2,733 00			
Costs.....	173 00	458 75	181 75	87 00	73 50	145 50	247 50	40 00	123 25	104 25	87 50	65 00	1,787 00			







TABLE NO. 4—RESULTS OF PROSECUTIONS FOR THE ENTIRE STATE JULY 1, 1916.  
TO JUNE 30, 1917.

	In Chicago.	Outside of Chicago.	Total entire State.
Child Labor Law—			
Under 14 years of age—			
Number of cases.....	9	20	29
Fines.....	\$70 00	\$37 25	\$161 25
Costs.....	45 00	111 15	156 15
Over 8 hours per day—			
Number of cases.....	78	46	122
Fines.....	\$485 00	\$395 00	\$880 00
Costs.....	333 00	233 05	566 05
Before 7 a. m.—after 7 p. m.—			
Number of cases.....	3	28	31
Fines.....	\$40 00	\$255 00	\$295 00
Costs.....	20 00	107 55	127 55
Without age or school certificate—			
Number of cases.....	104	83	187
Fines.....	\$636 00	\$558 00	\$1,194 00
Costs.....	655 75	417 35	1,073 10
Obstruction—			
Number of cases.....	3		3
Fines.....	\$20 00		\$20 00
Costs.....	5 75		5 75
Violation of section 11—			
Number of cases.....	12	3	15
Fines.....	\$110 00	\$25 00	\$135 00
Costs.....	60 00	12 20	72 20
Total—			
Number of cases.....	207	180	387
Fines.....	\$1,361 00	\$1,330 25	\$2,691 25
Costs.....	1,122 50	881 30	2,003 80
Women's Ten Hour Law—			
Over 10 hours per day—			
Number of cases.....	25	19	44
Fines.....	\$655 00	\$455 00	\$1,110 00
Costs.....	110 25	107 30	217 55
No time record—			
Number of cases.....	66	49	115
Fines.....	\$385 00	\$266 00	\$651 00
Costs.....	357 25	195 55	552 80
Total—			
Number of cases.....	91	88	159
Fines.....	\$1,040 00	\$721 00	\$1,761 00
Costs.....	467 50	302 85	770 35
Health, Safety and Comfort Law—			
Number of cases.....	15	14	29
Fines.....	\$175 00	\$125 00	\$300 00
Costs.....	100 00	98 30	198 30
Structural Law—			
Number of cases.....	5		5
Fines.....	\$75 00		\$75 00
Costs.....	40 75		40 75
Wash House Law—			
Number of cases.....	5	7	12
Fines.....	\$32 00	\$140 00	\$ 72 00
Costs.....	47 50	31 80	79 30
Blower Law—			
Number of cases.....	1	1	2
Fines.....	\$50 00	\$25 00	\$75 00
Costs.....	5 75	8 00	13 75
Total for all laws—			
Number of cases.....	324	270	594
Fines.....	\$2,733 00	\$2,341 25	\$5,074 25
Costs.....	1,787 00	1,322 25	3,109 25
Total fines and costs.....	\$4,520 00	\$3,663 50	\$8,183 50











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